



Evaluation of Travel Patterns and Demand Alternatives Evaluation Technical Memorandum

4.0 Evaluation of Travel Patterns and Demand

The current and future travel patterns within the study area were analyzed in detail for the four alternative corridors. An extensive list of information was collected to assist with the analysis of existing (2006) travel patterns and conditions within the study area. The travel patterns were analyzed at several levels, study area and corridor where possible. This information was also used to develop a travel demand model to evaluate both existing and future travel conditions within the study area. The detailed summary on the development of the inputs to the travel demand model and the model itself is contained in the following technical memorandums.

- Highway Network Development
- Traffic Analysis Zone Development
- Model Development

The model was then used to evaluate existing plus future year conditions in the study area without any transportation improvements. The results from these analyses as well as the future land use assumptions and demographic forecasts are documented in the following technical memorandums.

- Existing Conditions
- Future Conditions

4.1 Future Highway Network

The four detailed alternatives are compared against a future year 2040 transportation network that includes only the system that exists today and projects that have committed funding in the GDOT Construction Work Program (CWP) for construction and/or right of way in the next few years. This definition resulted with the term E+C to represent the future base year network. This allows an assessment of how each of the alternatives improves the southwest Georgia highway system relative to what we expect will be available by the year 2040, and a thorough assessment of the mobility, accessibility, cultural, environmental, land use and economic aspects of the proposed alternatives.

Each of the four alternatives is modeled using the travel demand model, developed specifically for this study. Highway networks reflecting the improvements associated with each alternative were prepared and assigned traffic flows based on network characteristics and the estimated 2040 trip table – the number and type of trips between locations. Results of this modeling in terms of the



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evaluation factors adopted for the study and their interpretation are presented in the body of this technical memorandum.

The 2040 network used to compare the hypothetical Interstate Alternatives is the existing road network plus committed projects or “E+C” network. Committed projects are those roadway capacity projects that are funded, all or in part, for construction or right-of-way acquisition in the July 2008 GDOT Construction Work Program. Capacity projects are the only type considered because they are the only projects likely to have significant impact on travel demand. Projects were reviewed against the on-line GDOT Transportation Explorer (TREX) system and by GDOT staff to ensure accuracy.

These committed projects represent those that will likely be completed in the next few years and, in conjunction with the existing southwest Georgia roadway system, represent the minimum road network to be expected in future years. Using the E+C network as a comparison allows evaluation of the hypothetical Interstate Alternatives in a way which should maximize their expected impacts. Table 4.1.1 lists the committed projects added to the existing network to derive the E+C network. Figure 4.1.1 shows the location of these projects within the study area.

4.2 Evaluation of the Alternatives

A variety of transportation performance measures were evaluated for the alternatives. The initial set of transportation performance measures for the study were developed and documented in ***Performance Measures - Technical Memorandum #8***. The performance measures for transportation include mobility, accessibility, livability, and sustainability, and are described for each alternative in the sections below. In addition, the travel patterns were summarized and analyzed.

4.2.1 Travel Patterns

The examination of the ten preliminary alternatives identified travel patterns within southwest Georgia most likely to be served by a new Interstate facility because of their significant inter-state origins and destinations for both passenger cars and trucks and overall travel volumes. The three primary markets being served by the four alternatives are southeast between Columbus/I-185 and I-75, south from Columbus/I-185 to I-10, and southwest from I-75 to I-10. All four alternatives run through Albany.

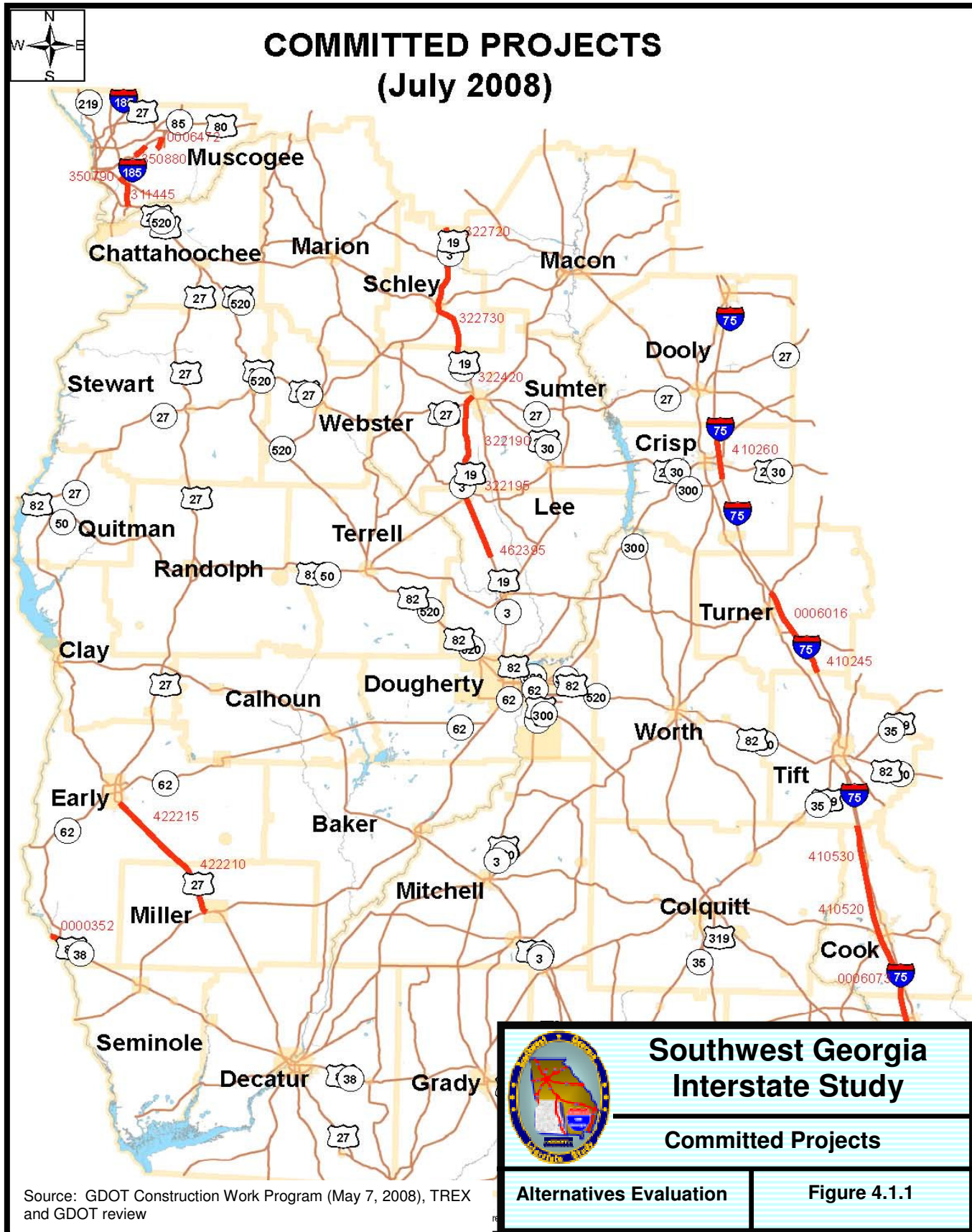


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Table 4.1.1
Committed Road Capacity Projects in the E+C Network

PROJ ID	ROAD	FROM	TO	IMPROVEMENT	COUNTY	LENGTH (MI)
311445	I-185	SR 520	St. Marys Rd	Widen from 4 to 6 lanes	Muscogee	2.83
410520	I-75	SR 37	CR 246/Kinard Bridge Rd	Widen from 4 to 6 lanes	Cook	9.47
410530	I-75	CR 246/Kinard Bridge Rd	Tift CO line	Widen from 4 to 6 lanes	Cook	3.99
410260	I-75	SR 300	Dooly CO line	Widen from 4 to 6 lanes	Crisp	6.56
410500	I-75	North of SR 133	Cook CO line	Widen from 4 to 6 lanes	Lowndes	13.60
0006073	I-75	Cook CO line	CR 204/Southwell Blvd	Widen from 4 to 6 lanes	Tift	6.24
0006016	I-75	SR 32	SR 159	Widen from 4 to 6 lanes	Turner	5.49
410245	I-75	Tift CO line	SR 32	Widen from 4 to 6 lanes	Turner	5.58
0006472	Schatulga Rd (Eastern Connector)	Red Arrow Rd/Cargo Rd	Chattsworth Rd	New 4 lane road	Muscogee	1.16
422215	SR 1/US 27	CR 279/Damascus-Hilton Rd	Blakely Bypass	Widen from 2 to 4 lanes	Early	7.00
422210	SR 1/US 27	West City Limits Colquitt	CR 279/Damascus-Hilton Rd	Widen from 2 to 4 lanes	Miller	9.50
350880	SR 22SP/Macon Rd	Reese Rd	Woodruff Farm Rd	Widen from 2 to 4 lanes	Muscogee	1.67
462395	SR 3/SR 49/US 19	North of CR151	Sumter CO line	Widen from 2 to 4 lanes	Lee	8.98
322195	SR 3/SR 49/US 19	Lee CO Line	CR 42/Sumter	Widen from 2 to 4 lanes	Sumter	5.33
322190	SR 3/SR 49/US 19	CR 42	0.3 Mi North of US 280	Widen from 2 to 4 lanes	Sumter	6.34
322420	SR 3/US 19	Angelica Creek/Sumter	SR 271	Widen from 2 to 4 lanes	Schley	6.73
322730	SR 3/US 19	SR 271	SR 240	Widen from 2 to 4 lanes	Schley	10.85
322720	SR 3/US 19	SR 240	CR 201/Cooper Rd/Taylor	Widen from 2 to 4 lanes	Schley	6.81
0000352	SR 38/US 84	Alabama State Line	SR 370	Widen from 2 to 4 lanes	Early	1.29
350790	St. Marys Rd	Buena Vista Rd	Robin Dr	Widen from 2 to 4 lanes	Muscogee	1.50

All projects from the GDOT Construction Work Program as of July, 2008, TREX, and GDOT review





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Figures 4.2.1 through 4.2.6 illustrate projected travel flows for each of the four alternatives and two variants (1A and 3A) in comparison to projected no-build travel flows for 2040. Projected travel flows are shown for both total traffic and truck traffic.

All of the alternatives show an increase in traffic from the E+C travel flows, and result in some reduction of travel in the I-75 corridor north of Valdosta. Alternative 2 produces the largest increase in travel in the corridor between Columbus and Albany, and Albany and Valdosta, and the largest increase in estimated truck traffic. Alternative 1 and 1A produce the largest increase in estimated total and truck volumes between Albany and Tallahassee. Alternative 3 and 3A produce the largest increase in estimated total and truck travel between Cordele and Albany. Alternative 4 produces the largest increase in estimated total travel and truck travel between Albany and Tifton.

4.2.2 Mobility

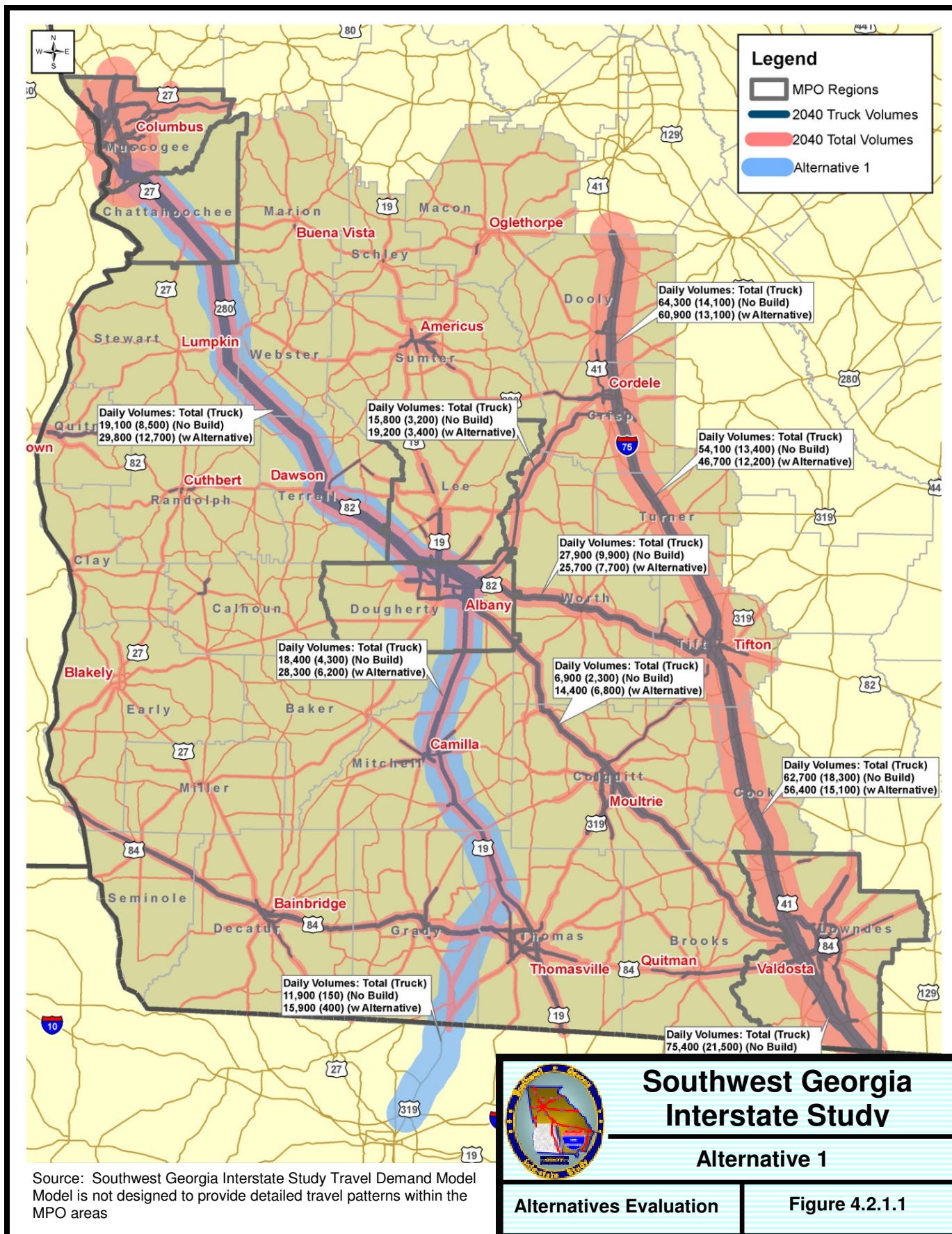
Mobility is the ease with which people and goods move about. For the purposes of this study five (5) measures of mobility were defined and examined, these are: total vehicles miles of travel (VMT), VMT by facility type (i.e. freeway/expressway, arterial, collector), VMT by facility type under congested conditions, VMT, vehicle hours of delay (VHT) and truck VMT by segment, and the percent increase or decrease in VMT by facility type.

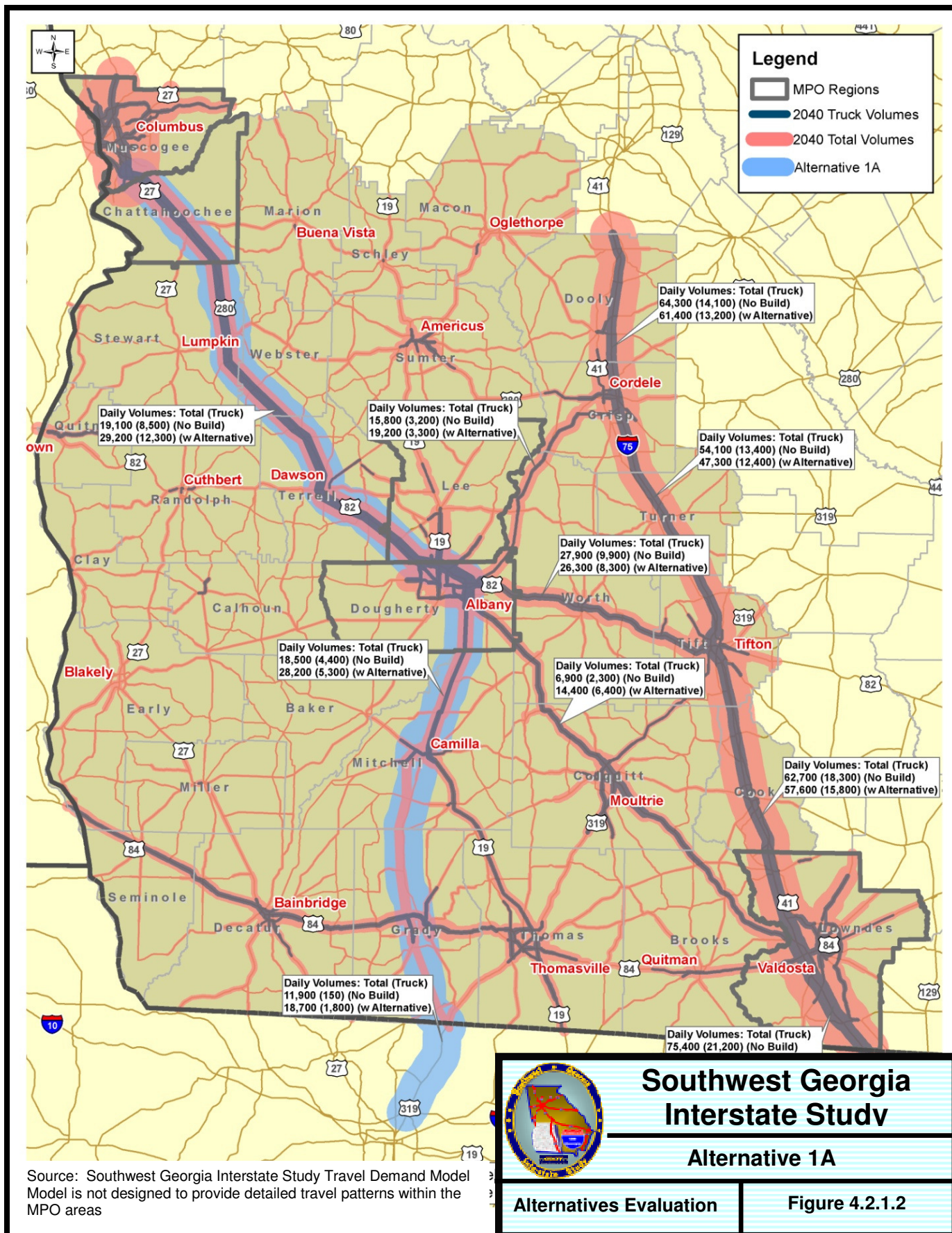
4.2.2.1. Total VMT and VMT by Facility Type

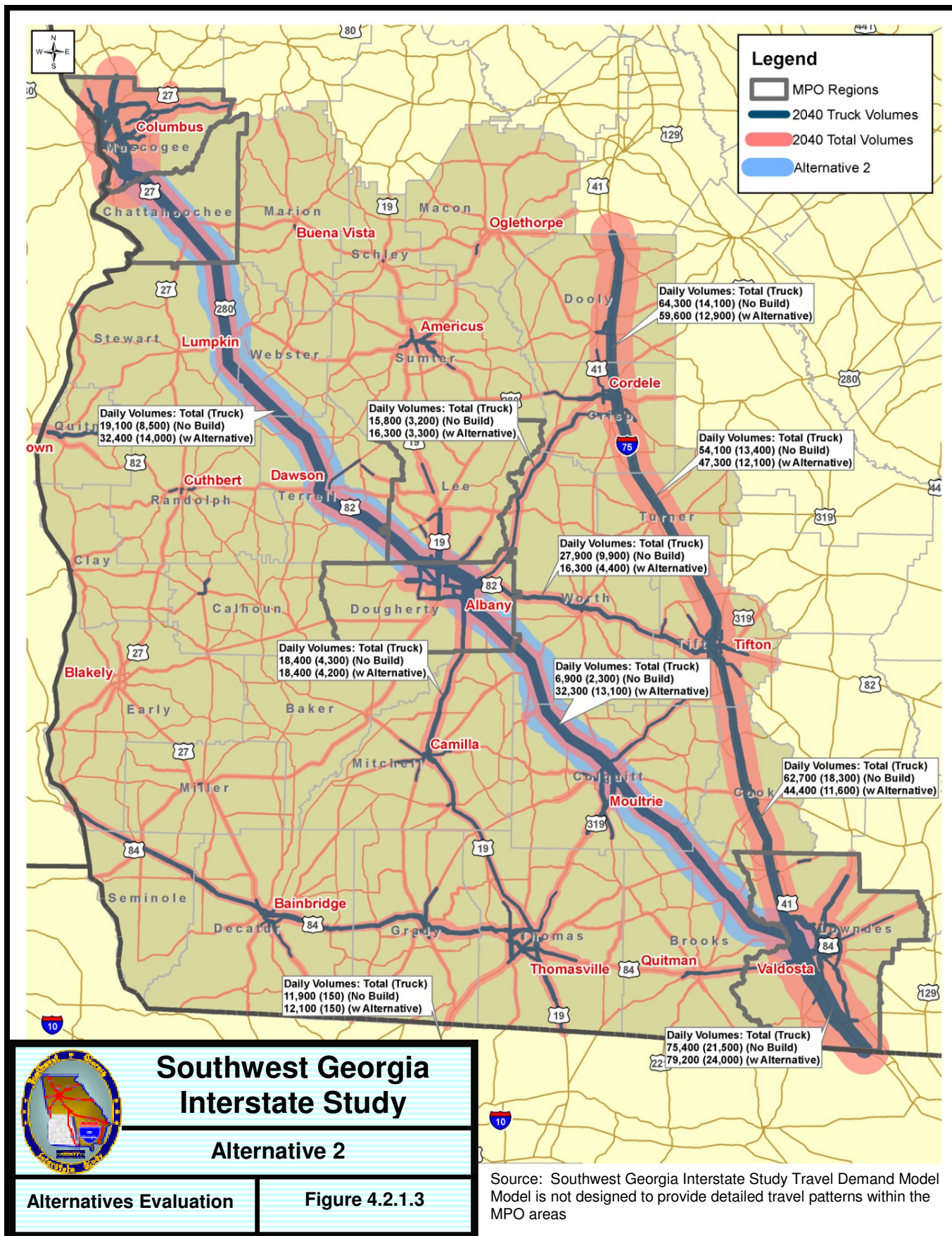
Total VMT is a measure of the amount of travel, or vehicular activity, by all vehicles in an area. For a given area it is typically derived by estimating the amount of travel on each road segment, multiplying that by the length of the road segment, and summing the result for all road segments. Table 4.2.2.1 shows the estimated 2040 VMT for the study area for each alternative.

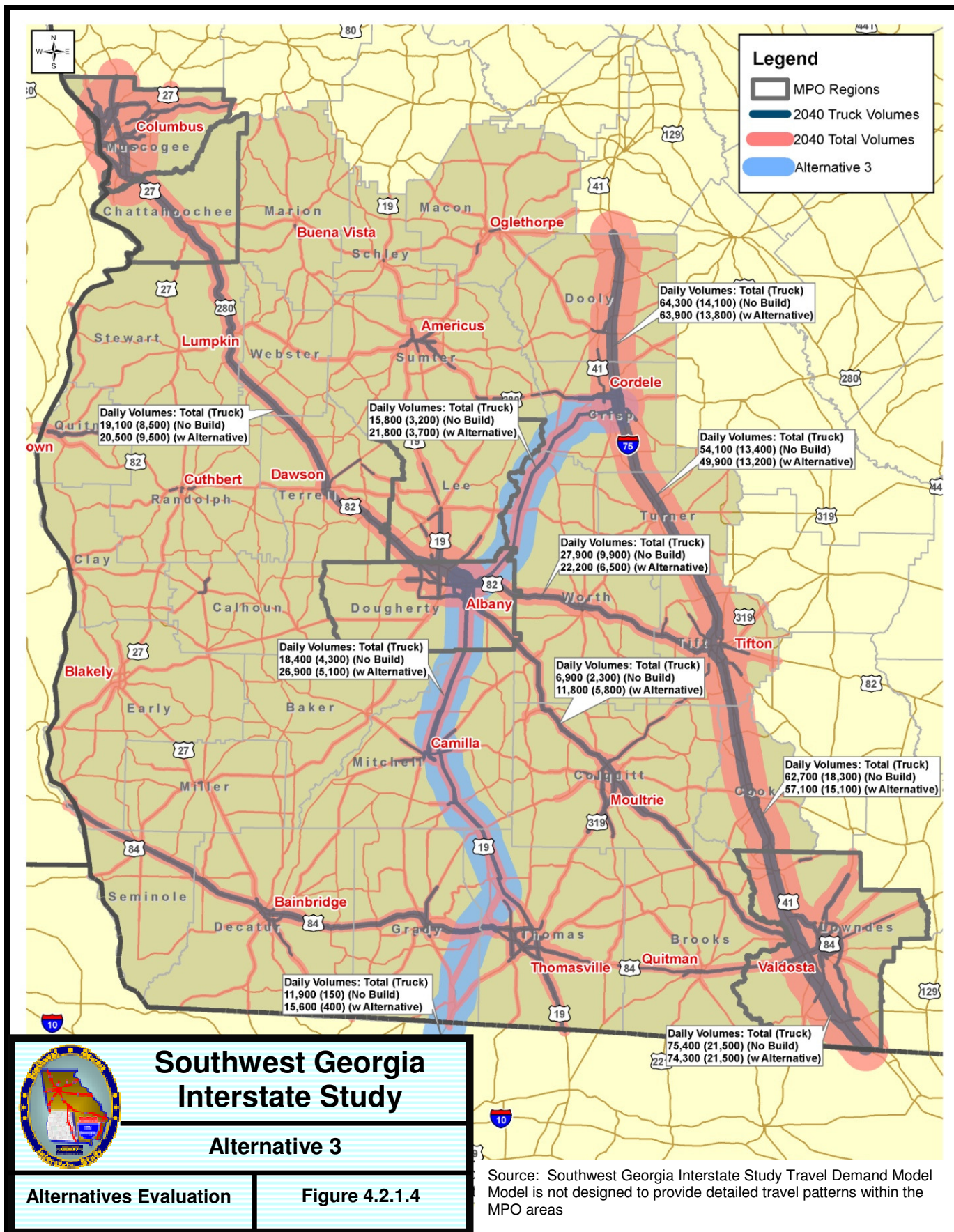
As expected, all alternatives have higher VMT than the E+C because they encourage longer trips – by drawing trips away from slower competing facilities -- and rerouting of some trips through the study area that would otherwise have gone outside the study area.

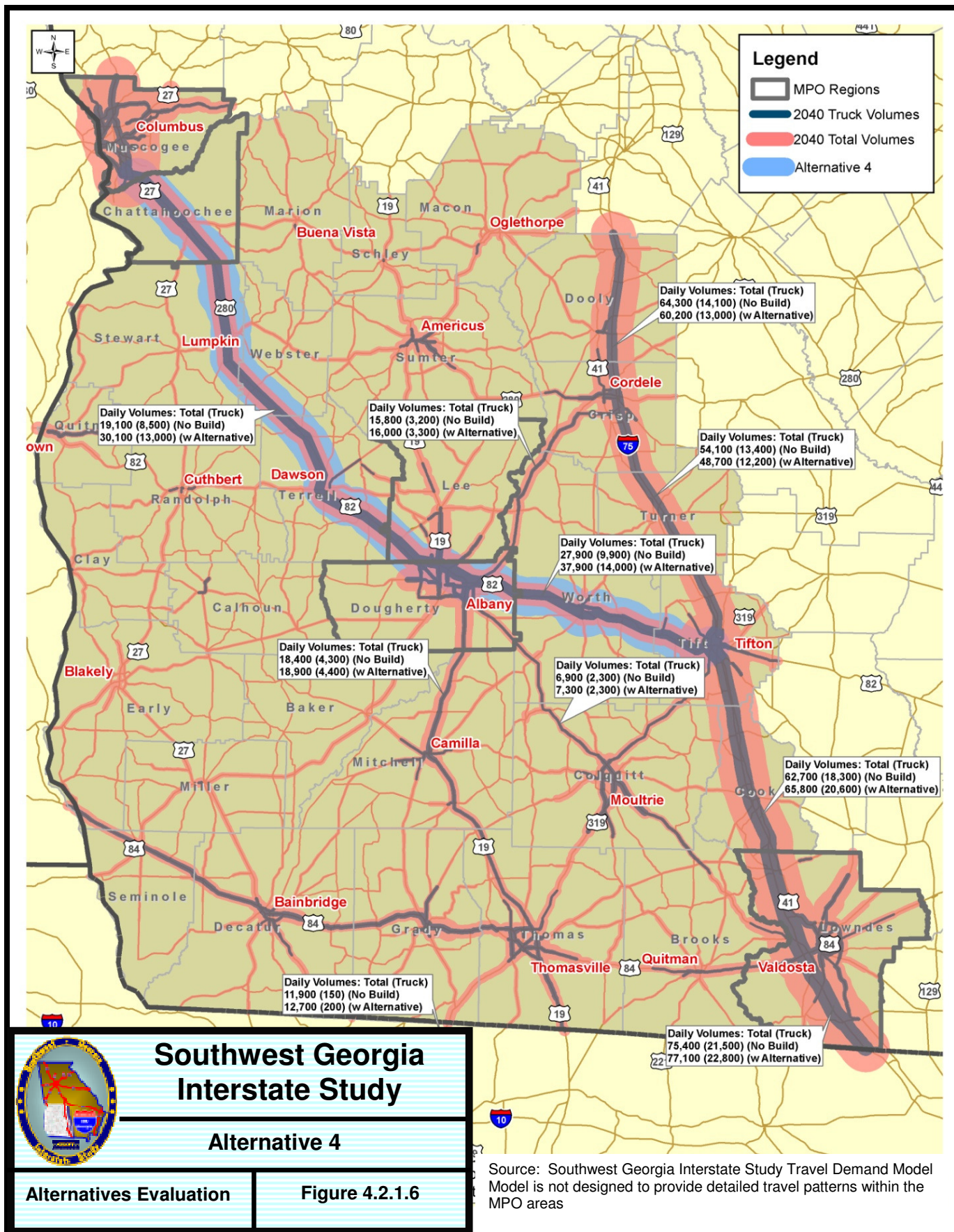
VMT by facility type is a measure of the distribution of travel across different types of roadways i.e. freeways, arterials, etc. This is important because facility types have varying average accident rates, capacities, speeds, and design characteristics. Table 4.2.2.1 shows VMT by facility type for all travel and travel by trucks within the study area forecast for 2040.













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Table 4.2.2.1
2040 VMT by Facility Type by Alternative for the Study Area

2040 Total VMT							
Total VMT	2040 E+C	Alt 1	Alt 1A	Alt 2	Alt 3	Alt 3A	Alt 4
Interstate	5,623,000	7,443,000	7,436,000	8,087,000	6,569,000	6,706,000	7,880,000
Arterial	12,067,000	10,775,000	10,817,000	10,253,000	11,375,000	11,394,000	10,373,000
Collector	2,735,000	2,659,000	2,669,000	2,646,000	2,655,000	2,664,000	2,658,000
Total	20,425,000	20,877,000	20,922,000	20,986,000	20,599,000	20,764,000	20,911,000

2040 Total VMT (% Distribution)							
Total VMT	2040 E+C	Alt 1	Alt 1A	Alt 2	Alt 3	Alt 3A	Alt 4
Interstate	28%	36%	36%	39%	32%	32%	38%
Arterial	59%	52%	52%	49%	55%	55%	50%
Collector	13%	13%	13%	13%	13%	13%	13%
Total	100%	100%	100%	100%	100%	100%	100%

2040 Truck VMT							
Total VMT	2040 E+C	Alt 1	Alt 1A	Alt 2	Alt 3	Alt 3A	Alt 4
Interstate	1,370,000	2,013,000	1,946,000	2,487,000	1,484,000	1,480,000	2,372,000
Arterial	3,409,000	3,020,000	3,038,000	2,589,000	3,413,000	3,398,000	2,672,000
Collector	835,000	820,000	823,000	820,000	820,000	823,000	822,000
Total	5,614,000	5,853,000	5,807,000	5,896,000	5,717,000	5,701,000	5,866,000

2040 Truck VMT (% Distribution)							
Total VMT	2040 E+C	Alt 1	Alt 1A	Alt 2	Alt 3	Alt 3A	Alt 4
Interstate	24%	34%	34%	42%	26%	26%	40%
Arterial	61%	52%	52%	44%	60%	60%	46%
Collector	15%	14%	14%	14%	14%	14%	14%
Total	100%	100%	100%	100%	100%	100%	100%

2040 % Truck VMT							
Total VMT	2040 E+C	Alt 1	Alt 1A	Alt 2	Alt 3	Alt 3A	Alt 4
Interstate	24%	27%	26%	31%	23%	22%	30%
Arterial	28%	28%	28%	25%	30%	30%	26%
Collector	31%	31%	31%	31%	31%	31%	31%
Total	27%	28%	28%	28%	28%	27%	28%



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Total VMT is estimated at approximately 20.5 million VMT per day with 59% of this VMT occurring on the arterial system for the E+C Network. Truck VMT is estimated at approximately 5.6 million VMT per day, or about 25% of all VMT. On the 2040 E+C network, the arterial system carries over 60% of all truck VMT.

All of the alternatives have a slight increase in total VMT with Alternative 2 showing the largest increase in total VMT; an increase of approximately 0.4 million VMT. The percentage of total VMT on interstates increases for all alternatives in comparison to the E+C; with the increase coming from the arterial system and VMT on collectors remaining constant. Arterial system VMT drops from 59% of total VMT under E+C to 49% under Alternative 2, a reduction of more than 17%.

There is a slightly larger shift in truck VMT from arterials to the interstate system. Under the E+C scenario, 61% of truck VMT is on the arterial system while for Alternative 2 this drops to 44%, a reduction of nearly 28%. Moving traffic to higher level facilities typically reduces accidents and is considerably preferable for handling long haul trucks both from a design perspective and to maintain truck speeds.

4.2.2.2. Change in Vehicle Miles of Travel (VMT) by Alternate

Table 4.2.2.2.1 shows the change in 2040 Total Daily VMT for each Alternate in comparison to the E+C network by different levels of geography. For each alternative the change in VMT is shown for the Alternative Corridor, the I-75 Corridor from Dooly County south to Lowndes County, and for the 32 county Study Area. Alternative Corridor total Daily VMT increases range from 50.0% to 111.4%. This is because more travelers are attracted to the corridor to utilize the new facility. The diversion of traffic to utilize the alternative facilities lead to the reduction in traffic on the I-75 Corridor. This reduction ranged from 3.9% to 19.9%. Overall there was a small increase in VMT in the Study Area due to addition of the interstate facility. Daily VMT increases dramatically within the alternative corridors, decreases in the I-75 Corridor and increases slightly within the entire study area.

Alternative 2 has the largest impact on total daily VMT; it reduces VMT within the I-75 Corridor by nearly 20% while increasing VMT within the Alternative 2 Corridor by over 100% and overall Study Area VMT by 2.7%. Alternative 3 has the least impact on VMT within the Study Area, increasing average daily VMT by less than 1%.



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Table 4.2.2.2.1
Percent Change in 2040 Daily VMT from E+C

Alternate	Alternate Corridor	I-75 Corridor	Study Area
1	55.6	-11.1	2.2
1A	55.8	-9.5	2.4
2	111.4	-19.9	2.7
3	53.1	-6.6	0.8
3A	64.3	-4.6	1.6
4	50.0	-3.9	2.3

Table 4.2.2.2.2 shows the change in 2040 Daily Truck VMT for each Alternate in comparison to the E+C network. The overall pattern of estimated change in Daily Truck VMT is similar to that for Total Daily VMT with some exceptions. The Alternatives tend to increase Daily Truck VMT more within the Study Area more than Total Daily VMT; ranging from 1.5% to 4.3%. Reductions in I-75 Corridor Daily Truck VMT, tends to be higher ranging from 8.0% to 25.2% for all alternatives except Alternative 4 which increases I-75 Corridor Truck VMT by slightly.

As with Total Daily VMT, Alternative 2 has the largest impact on Truck VMT generating the largest increase in Study Area and Alternate Corridor VMT, at 4.8% and over 135% respectively, and the largest reduction in I-75 Corridor Daily Truck VMT of 25.2%.

Table 4.2.2.2.2
Percent Change in 2040 Daily Truck VMT from E+C

Alternate	Alternate Corridor	I-75 Corridor	Study Area
1	55.6	-13.1	4.1
1A	50.0	-10.5	3.3
2	135.3	-25.2	4.8
3	23.5	-8.6	1.8
3A	43.7	-8.0	1.5
4	56.2	-0.6	4.3



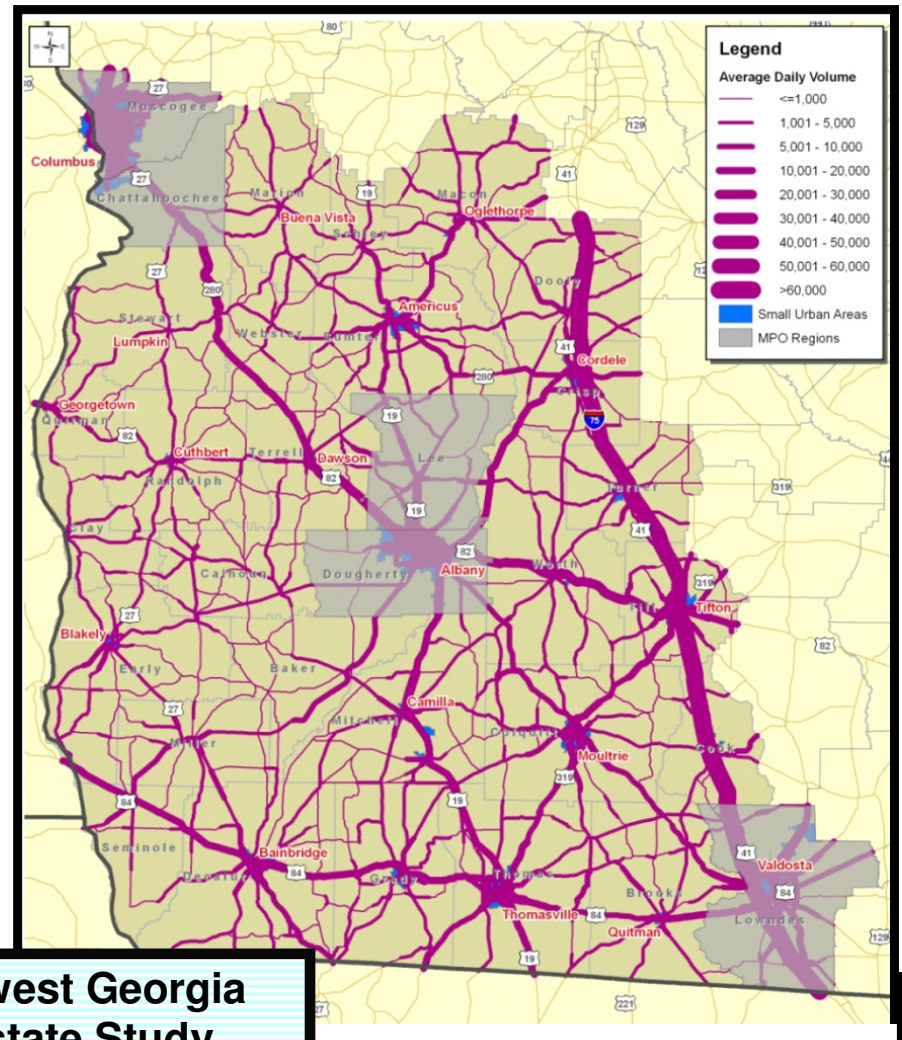
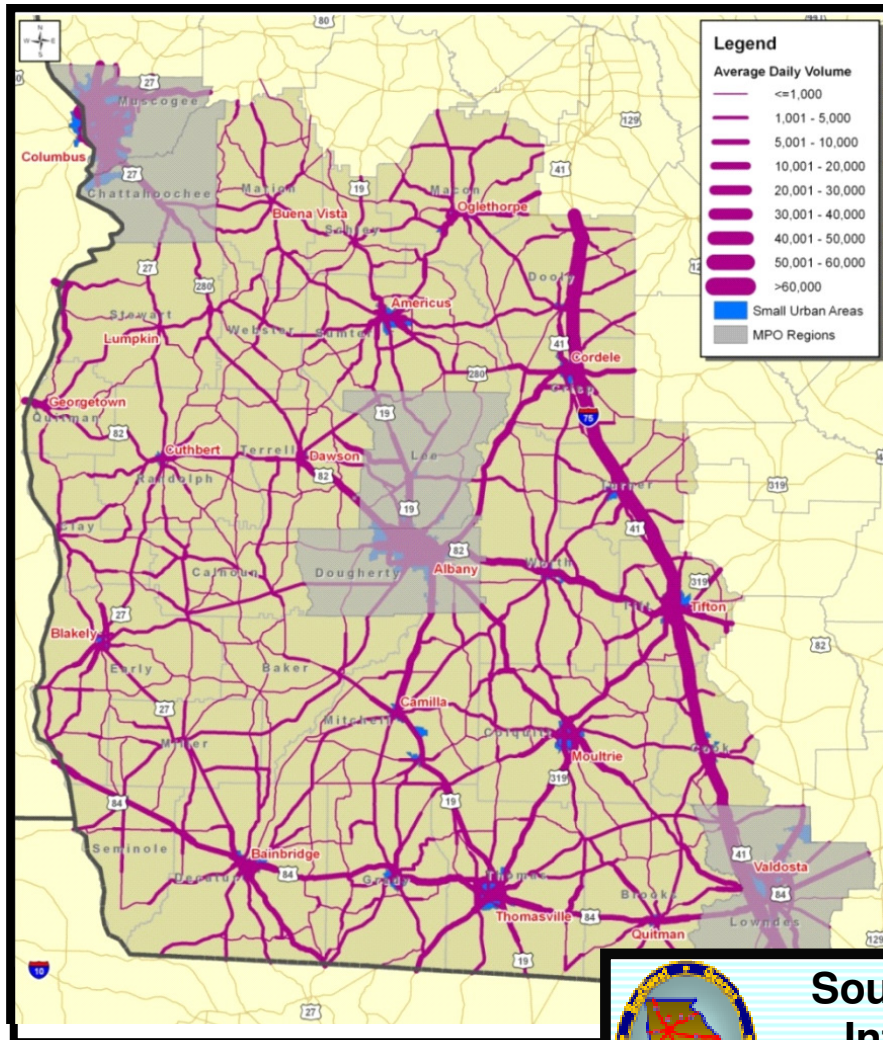
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Figure 4.2.2.2.1 shows Total Traffic Volumes on the Southwest Georgia road network for the 2006 base year and 2040 future year E+C network. As can be seen, total daily traffic volumes in 2040 are higher overall but the pattern of traffic volumes is generally consistent, with the highest volumes in the I-75 corridor. I-75 is assumed to have six through lanes throughout the study area by 2040.

Figure 4.2.2.2.2 shows the Level-of-Service (LOS) Analysis for the Southwest Georgia road network for the 2006 base year and 2040 E+C network. The analysis shows few roads operating at level of service D, moderate congestion, or worse within the study area, outside the MPO regions, in 2006. For 2040 this is still generally the case, although there begin to be a few more road segments with poor level of service, typically within or adjacent to small urban areas and cities in the study area. An exception to this is GA 133 through Colquitt County and the City of Moultrie which has some sections forecast to operate at LOS D and E. The LOS forecast shown for GA 133 within Colquitt County is taken from the Colquitt County Multi-Modal Study, which are based on a county specific travel demand model.

Base Year (2006)

Future Year (2040) E+C



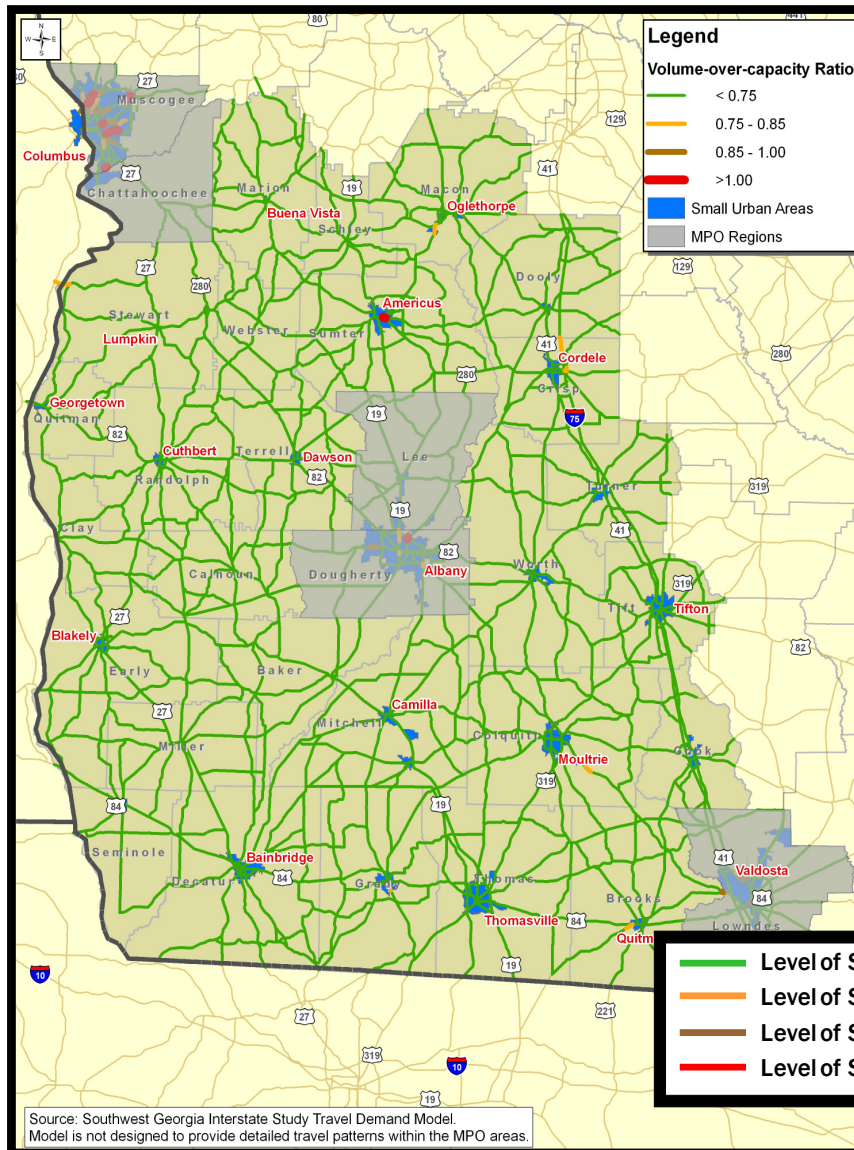
Southwest Georgia Interstate Study

Total Daily Traffic Volumes

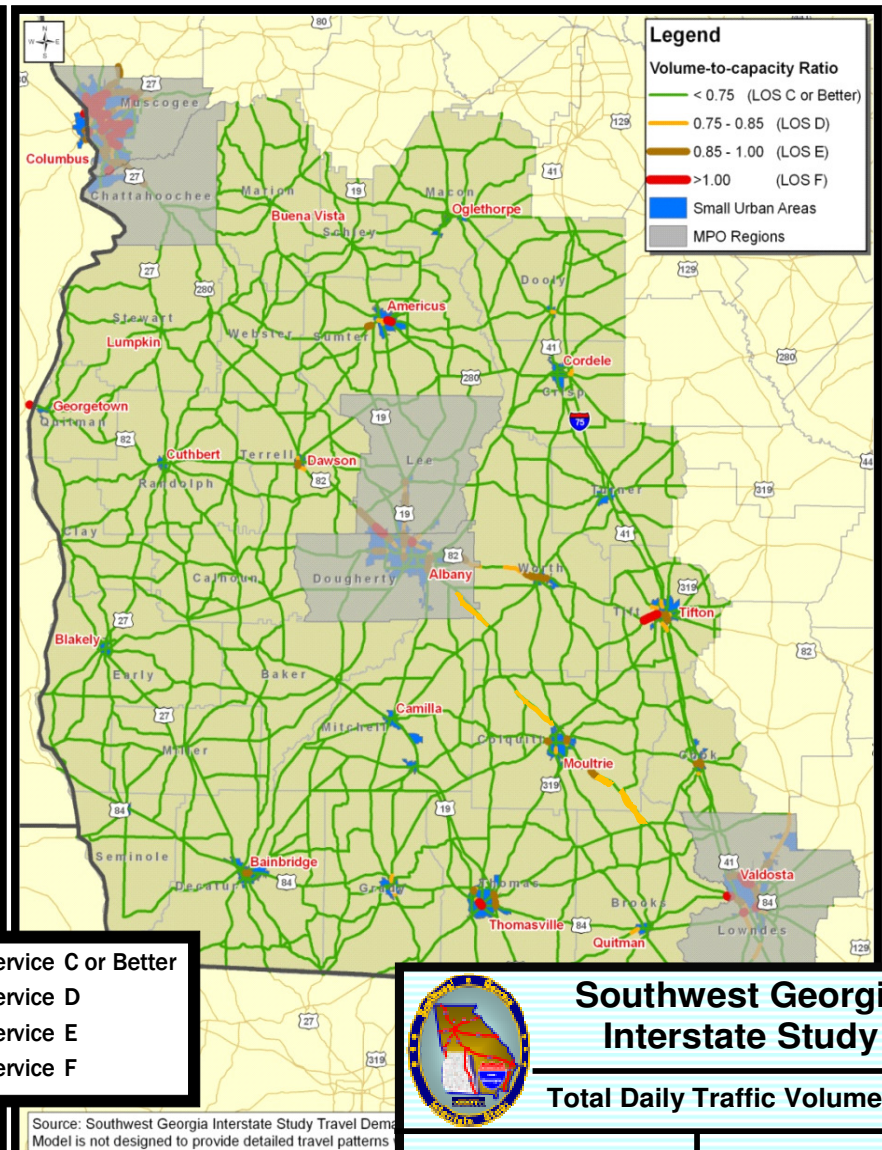
Alternatives Evaluation

Figure 4.2.2.2.1

Base Year (2006)



Future Year (2040) E+C



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Total Daily Traffic Volumes

Alternatives Evaluation

Figure 4.2.2.1



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4.2.2.3. VMT by Facility Type under Congested Conditions

This measure evaluates the amount of travel occurring under congested conditions by facility type. This is an important measure of evaluation because it indicates the overall percent of travel that is subject to congestion and the extent to which the various alternatives reduce that congestion. Table 4.2.2.3.1 shows the number and percentage of lane miles operating in congested conditions by facility type, and the amount and percentage of VMT operating in congested conditions by facility type. The definition for congested conditions is where the volume to capacity (V/C) ratio exceeds .70.

Table 4.2.2.3.1
2040 Road Congestion
Percentage of Congested Lane Miles and VMT by Road Type

Percent of Congested Lane-Miles							
	E+C	Alt 1	Alt 1A	Alt 2	Alt 3	Alt 3A	Alt 4
Interstate	7.3%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%
Arterial	2.4%	2.2%	2.2%	1.2%	1.8%	2.0%	1.0%
Collector	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%
Total	1.6%	1.1%	1.1%	0.6%	0.9%	1.0%	1.2%
Percent of Congested VMT							
	E+C	Alt 1	Alt 1A	Alt 2	Alt 3	Alt 3A	Alt 4
Interstate	8.8%	0.6%	0.6%	0.0%	0.7%	0.7%	11.3%
Arterial	6.7%	7.5%	7.5%	3.9%	5.3%	6.2%	3.5%
Collector	0.8%	0.9%	0.8%	0.8%	0.8%	0.8%	0.8%
Total	6.5%	4.2%	4.2%	2.0%	3.3%	3.7%	6.1%

Key	
##%	Greater than 5%
##%	Between 2-5%
##%	Less than 2%

The table shows that for all facility types less than 10% of the lane miles are congested (operating at a volume to capacity ratio, or V/C, greater than .70) and less than 10% of the VMT operates under congested conditions on the 2040 E+C network. So there isn't much congestion in general within the 2040 SWGIS network, very little of it is severe congestion, and not much of the travel (VMT) is



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subject to congested conditions. Cells of the table are color coded so that percentages greater than 5% are colored green and percentages from 2 to 5% are colored yellow.

All alternatives reduce the total percentage of lane miles with $V/C > .7$, though Alternative 4 has a slightly higher percentage of congested Interstate lane-miles. All alternatives reduce the percentage of congested VMT, however, Alternative 4 which has a greater percentage of congested Interstate VMT than E+C, and Alternative 1 and 1A have a higher percentage of congested arterial VMT than E+C.

4.2.2.4. Vehicle Hours of Delay

Delay is time spent traveling at less than posted/free-flow speeds, and is a measure associated both with system inefficiency and necessary traffic operations controls. Table 4.2.2.4.1 shows the Total Vehicle Hours of Delay (VHD) associated with the E+C network and the reduction of VHD for each alternative by facility type. The table cells are colored green when there is a reduction in delay of 50% or more, and yellow when there is a reduction in delay of between 20 and 50%, to denote significant reduction in delay. As can be seen in Table 4.2.2.4.1, Alternative 2 results in the most reduction in delay from E+C, reducing overall delay by nearly half and reducing delay on most roadway types.

Table 4.2.2.4.1
2040 Road Congestion
Change in Percentage of Delay by Area and Road Type

		Hours of Delay	Percent Reduction from 2040 E+C					
Area	Functional Class	2040 E+C	Alt 1	Alt 1A	Alt 2	Alt 3	Alt 3A	Alt 4
	Rural Interstate	4,270	-37.0%	-33.5%	-44.0%	-33.3%	-26.5%	5.2%
	Rural Arterial	3,260	-28.8%	-26.7%	-69.9%	-52.5%	-52.5%	-73.0%
	Rural Collectors	510	-17.6%	-19.6%	-19.6%	-13.7%	-17.6%	-19.6%
	Rural Local Road	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total	8,040	-32.5%	-29.9%	-53.0%	-39.8%	-36.4%	-28.1%
Urban	Urban Interstate	510	-37.3%	-29.4%	-68.6%	-13.7%	-3.9%	33.3%
	Urban Arterial	6,340	-12.6%	-12.9%	-42.7%	-15.1%	-16.9%	-41.6%
	Urban Collector	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total	6,850	-14.5%	-14.2%	-44.7%	-15.0%	-15.9%	-36.1%
	Grand Total	14,890	-24.2%	-22.6%	-49.2%	-28.4%	-27.0%	-31.8%



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**Table 4.2.2.4.1 (continued)
2040 Road Congestion
Change in Percentage of Delay by Area and Road Type**

##%	Greater than 50%
##%	Between 20 - 50%
##%	Less than 20%

4.2.2.5. Change in Daily Vehicle Hours of Delay and Vehicle Hours of Travel by Alternate

Table 4.2.2.5.1 shows the forecast change in 2040 Daily Vehicle Hours of Delay (VHD) from the E+C network for each alternative by the Alternate Corridor, I-75 Corridor from Dooly to Lowndes County, and for the 32 county Study Area. VHD is calculated by subtracting the total hours of free-flow travel from the total hours of travel leaving the hours of travel that occur under non free-flow conditions. The table shows that all alternatives result in significant reduction in VHD within their corridor and for the Study Area, and most – with the exception of Alternative 4 – significantly reduce VHD in the I-75 Corridor. Alternative 2 provides the most overall reduction in VHD.

**Table 4.2.2.5.1
Percent Change in 2040 Daily VHD from E+C**

Alternate	Alternate Corridor	I-75 Corridor	Study Area
1	-62.2	-85.9	-32.0
1A	-63.0	-68.2	-29.3
2	-67.9	-187.2	-96.9
3	-55.8	-45.8	-39.8
3A	-54.6	-32.1	-37.1
4	-84.9	-4.1	-46.7

Table 4.2.2.5.2 show the forecast change in 2040 Daily Vehicle Hours of Travel (VHT) from the E+C network for each alternative by the Alternate Corridor, I-75 Corridor from Dooly to Lowndes County, and for the 32 county Study Area. As can be seen in the table, each of the alternatives increases forecast VHT from the E+C network within the Alternate Corridor, as travel is drawn to the new high level roadway. Increases in Alternate Corridor range from 8.9% to 58.1% with Alternate 2 exhibiting the highest increase and Alternate 3 the lowest increase. Each of the alternatives reduces VHT within the I-75 Corridor and within the Study Area. Reduction in

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forecast VHT within the I-75 Corridor ranges from 3.7%, for Alternate 4, to 19.3%, for Alternate 2. Reduction in forecast VHT within the Study Area ranges from 1.4%, for Alternate 1 and 1A, to 2.5%, for Alternate 2.

Table 4.2.2.5.2
Percent Change in 2040 Daily VHT from E+C

Alternate	Alternate Corridor	I-75 Corridor	Study Area
1	12.8	-12.0	-1.4
1A	12.0	-10.0	-1.4
2	58.1	-19.3	-2.5
3	8.9	-7.6	-2.2
3A	14.2	-5.5	-1.8
4	12.3	-3.7	-1.9

4.2.3 Accessibility

Accessibility is the ease of access or approach to an area and is usually a measure of time. It determines the choice of trip destination based on mode and land use. It relates the linkages between the transportation system and land use patterns. The following measures as used to evaluate the change in accessibility for each of the alternatives: access to interstate travel times, accessibility index for work trips, a comparison of travel times between southwest Georgia cities, and travel time contours (isochrones) from Albany.

4.2.3.1. Access to Interstate Travel Times

Table 4.2.3.1 shows Interstate travel times from selected cities in southwest Georgia to I-75, I-10, and I-185 for each alternative in comparison to the E+C. In general all cities see some improvement in travel times to interstates as a result of the alternative networks; however there are some exceptions for certain trips and the improvements are uneven. The largest improvements in access time for I-75 tend to come from Alternative 4. The largest improvements in access time for I-10 are from Alternatives 1 and 3. Access times for I-185 are improved most by Alternatives 1, 2 and 4. There are minor differences in access time improvements between Alternative 1 and 1A, and 3 and 3A.



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Table 4.2.3.1
2040 Interstate Access Time in Minutes
By City by Alternative and Change in Percent from E+C

	I-75			I-185			I-10		
	2040 EC	2040 Alt 1	% Change	2040 EC	2040 Alt 1	% Change	2040 EC	2040 Alt 1	% Change
Albany	56	54	-4%	105	86	-18%	143	115	-19%
Americus	43	38	-11%	86	74	-14%	198	168	-15%
Bainbridge	101	100	-1%	144	135	-6%	86	82	-4%
Blakely	125	123	-2%	107	98	-8%	139	135	-3%
Buena Vista	83	78	-6%	50	45	-9%	219	190	-13%
Camilla	73	73	-1%	140	115	-18%	104	93	-10%
Columbus	122	106	-14%	0	0	0%	236	197	-17%
Cordele	0	0	0%	122	106	-14%	140	138	-1%
Cuthbert	93	87	-6%	69	64	-8%	170	155	-9%
Dawson	65	59	-9%	75	65	-14%	175	140	-20%
Georgetown	122	113	-7%	71	70	-1%	203	190	-7%
Lumpkin	94	84	-11%	54	49	-9%	191	167	-13%
Moultrie	33	33	0%	159	131	-18%	98	93	-6%
Oglethorpe	47	46	-1%	87	84	-3%	182	180	-1%
Quitman	26	26	0%	198	167	-16%	82	82	0%
Thomasville	53	52	0%	171	138	-19%	71	65	-8%
Tifton	0	0	0%	156	134	-14%	107	106	-2%
Valdosta	0	0	0%	202	179	-12%	65	65	0%



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Table 4.2.3.1
2040 Interstate Access Time
By City by Alternative and Change in Percent from E+C (continued)

	I-75			I-185			I-10		
	2040 EC	2040 Alt 1A	% Change	2040 EC	2040 Alt 1A	% Change	2040 EC	2040 Alt 1A	% Change
Albany	56	55	-3%	105	85	-19%	143	114	-20%
Americus	43	38	-11%	86	74	-14%	198	167	-16%
Bainbridge	101	99	-2%	144	134	-6%	86	78	-9%
Blakely	125	124	-1%	107	98	-9%	139	130	-6%
Buena Vista	83	78	-6%	50	45	-10%	219	189	-14%
Camilla	73	73	-1%	140	114	-18%	104	82	-21%
Columbus	122	106	-14%	0	0	0%	236	195	-17%
Cordele	0	0	0%	122	106	-14%	140	138	-1%
Cuthbert	93	87	-6%	69	64	-8%	170	154	-9%
Dawson	65	59	-9%	75	64	-15%	175	139	-21%
Georgetown	122	113	-7%	71	70	-2%	203	189	-7%
Lumpkin	94	84	-11%	54	49	-10%	191	166	-13%
Moultrie	33	33	0%	159	130	-18%	98	95	-4%
Oglethorpe	47	46	-1%	87	84	-3%	182	180	-1%
Quitman	26	26	-1%	198	172	-13%	82	82	0%
Thomasville	53	52	-1%	171	145	-15%	71	67	-6%
Tifton	0	0	0%	156	134	-14%	107	106	-1%
Valdosta	0	0	0%	202	179	-12%	65	65	0%

	I-75			I-185			I-10		
	2040 EC	2040 Alt 2	% Change	2040 EC	2040 Alt 2	% Change	2040 EC	2040 Alt 2	% Change
Albany	56	51	-10%	105	86	-18%	143	142	-1%
Americus	43	38	-12%	86	74	-13%	198	196	-1%
Bainbridge	101	99	-1%	144	135	-6%	86	86	0%
Blakely	125	120	-4%	107	98	-8%	139	138	0%
Buena Vista	83	78	-6%	50	45	-9%	219	216	-1%
Camilla	73	73	-1%	140	120	-15%	104	104	0%
Columbus	122	106	-13%	0	0	0%	236	221	-6%
Cordele	0	0	0%	122	106	-13%	140	138	-1%
Cuthbert	93	87	-6%	69	64	-7%	170	165	-3%
Dawson	65	59	-9%	75	65	-14%	175	167	-5%
Georgetown	122	113	-7%	71	70	-1%	203	199	-2%
Lumpkin	94	84	-11%	54	49	-9%	191	186	-3%
Moultrie	33	33	-1%	159	122	-23%	98	98	0%
Oglethorpe	47	46	-1%	87	84	-3%	182	180	-1%
Quitman	26	26	-1%	198	159	-20%	82	83	2%
Thomasville	53	52	-1%	171	150	-12%	71	71	0%
Tifton	0	0	0%	156	131	-16%	107	107	-1%
Valdosta	0	0	0%	202	159	-21%	65	66	2%



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Table 4.2.3.1
2040 Interstate Access Time
By City by Alternative and Change in Percent from E+C (continued)

	I-75			I-185			I-10		
	2040 EC	2040 Alt 3	% Change	2040 EC	2040 Alt 3	% Change	2040 EC	2040 Alt 3	% Change
Albany	56	52	-7%	105	106	1%	143	115	-19%
Americus	43	38	-11%	86	83	-3%	198	170	-14%
Bainbridge	101	101	0%	144	140	-2%	86	82	-4%
Blakely	125	121	-3%	107	104	-3%	139	135	-3%
Buena Vista	83	78	-5%	50	50	1%	219	192	-12%
Camilla	73	73	-1%	140	137	-2%	104	93	-10%
Columbus	122	115	-6%	0	0	0%	236	218	-8%
Cordele	0	0	0%	122	115	-6%	140	138	-1%
Cuthbert	93	84	-9%	69	70	1%	170	161	-5%
Dawson	65	56	-13%	75	76	1%	175	148	-16%
Georgetown	122	113	-8%	71	70	-1%	203	195	-4%
Lumpkin	94	85	-10%	54	55	2%	191	178	-7%
Moultrie	33	33	-1%	159	152	-4%	98	93	-6%
Oglethorpe	47	47	0%	87	86	-1%	182	181	-1%
Quitman	26	26	0%	198	189	-5%	82	82	0%
Thomasville	53	52	0%	171	161	-6%	71	65	-8%
Tifton	0	0	0%	156	152	-3%	107	106	-2%
Valdosta	0	0	0%	202	198	-2%	65	64	0%

	I-75			I-185			I-10		
	2040 EC	2040 Alt 3A	% Change	2040 EC	2040 Alt 3A	% Change	2040 EC	2040 Alt 3A	% Change
Albany	56	52	-7%	105	105	0%	143	114	-20%
Americus	43	38	-11%	86	82	-4%	198	169	-15%
Bainbridge	101	99	-1%	144	140	-3%	86	78	-9%
Blakely	125	121	-3%	107	103	-3%	139	130	-6%
Buena Vista	83	78	-5%	50	50	1%	219	191	-13%
Camilla	73	73	-1%	140	136	-3%	104	82	-21%
Columbus	122	114	-6%	0	0	0%	236	217	-8%
Cordele	0	0	0%	122	114	-6%	140	138	-1%
Cuthbert	93	84	-9%	69	69	1%	170	157	-7%
Dawson	65	56	-13%	75	76	1%	175	147	-16%
Georgetown	122	113	-8%	71	70	-2%	203	190	-6%
Lumpkin	94	85	-10%	54	55	1%	191	177	-7%
Moultrie	33	33	-1%	159	152	-5%	98	94	-4%
Oglethorpe	47	47	0%	87	86	-1%	182	181	-1%
Quitman	26	26	0%	198	194	-2%	82	82	0%
Thomasville	53	52	-1%	171	167	-2%	71	67	-6%
Tifton	0	0	0%	156	152	-3%	107	106	-1%
Valdosta	0	0	0%	202	198	-2%	65	65	0%



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Table 4.2.3.1
2040 Interstate Access Time
By City by Alternative and Change in Percent from E+C (continued)

	I-75			I-185			I-10		
	2040 EC	2040 Alt 4	% Change	2040 EC	2040 Alt 4	% Change	2040 EC	2040 Alt 4	% Change
Albany	56	43	-24%	105	86	-18%	143	143	0%
Americus	43	38	-11%	86	74	-14%	198	197	-1%
Bainbridge	101	100	-1%	144	135	-6%	86	86	0%
Blakely	125	112	-11%	107	98	-8%	139	139	0%
Buena Vista	83	78	-6%	50	45	-9%	219	217	-1%
Camilla	73	72	-2%	140	120	-14%	104	104	0%
Columbus	122	106	-14%	0	0	0%	236	222	-6%
Cordele	0	0	0%	122	106	-14%	140	141	1%
Cuthbert	93	87	-6%	69	64	-7%	170	165	-2%
Dawson	65	59	-9%	75	65	-14%	175	168	-4%
Georgetown	122	113	-7%	71	70	-1%	203	199	-2%
Lumpkin	94	84	-11%	54	49	-9%	191	187	-2%
Moultrie	33	33	-1%	159	131	-17%	98	98	0%
Oglethorpe	47	46	-1%	87	84	-3%	182	183	0%
Quitman	26	26	0%	198	176	-11%	82	82	1%
Thomasville	53	52	-1%	171	151	-12%	71	71	0%
Tifton	0	0	0%	156	121	-22%	107	109	1%
Valdosta	0	0	0%	202	168	-17%	65	65	1%

4.2.4 Accessibility Index

The accessibility index is a measure of access to jobs that relates travel time to the number of jobs within reach of an area. The higher the index number the more jobs are accessible to a given area. The categories of excellent, good, fair, and poor are based on the distribution of the index values under E+C. The accessibility index is applied at the TAZ level within the SWGIS travel demand model. Table 4.2.4.1 indicates the populations within each category and the overall change in the category of accessibility between alternatives.

As can be seen in the table, more than 85% the residents of the study area are expected to have good or excellent job accessibility in 2040 based on the forecast distribution of population and employment. This percentage increases by 2 to 3% under all the alternatives, by shifting population from the poor and fair categories into the good or excellent categories. The largest reduction of people in the poor job accessibility category is under Alternative 1 and 1A.



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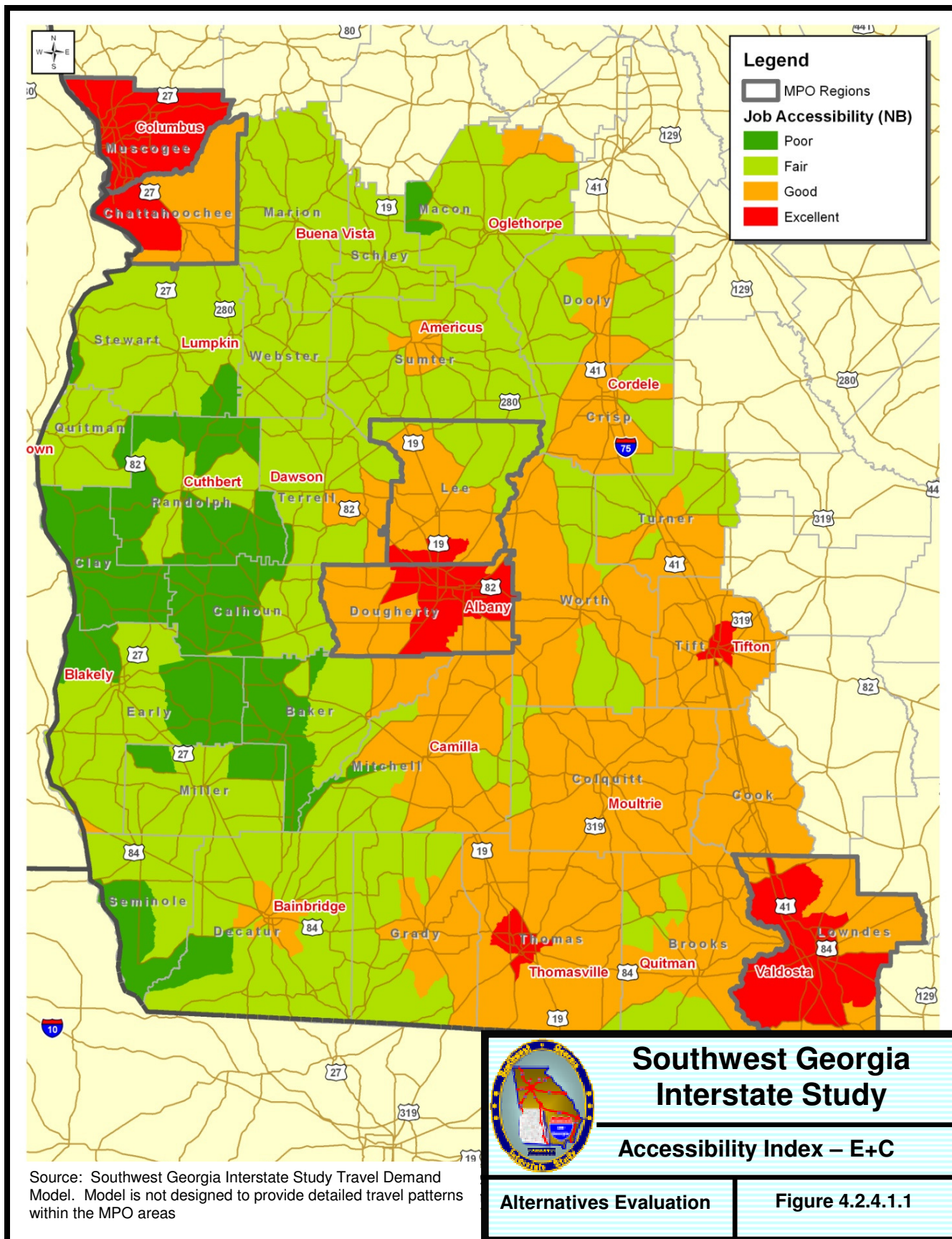
Table 4.2.4.1
2040 Job Accessibility Index
by Alternative by Category and Change in Percent from E+C
Based on Projected 2040 Population

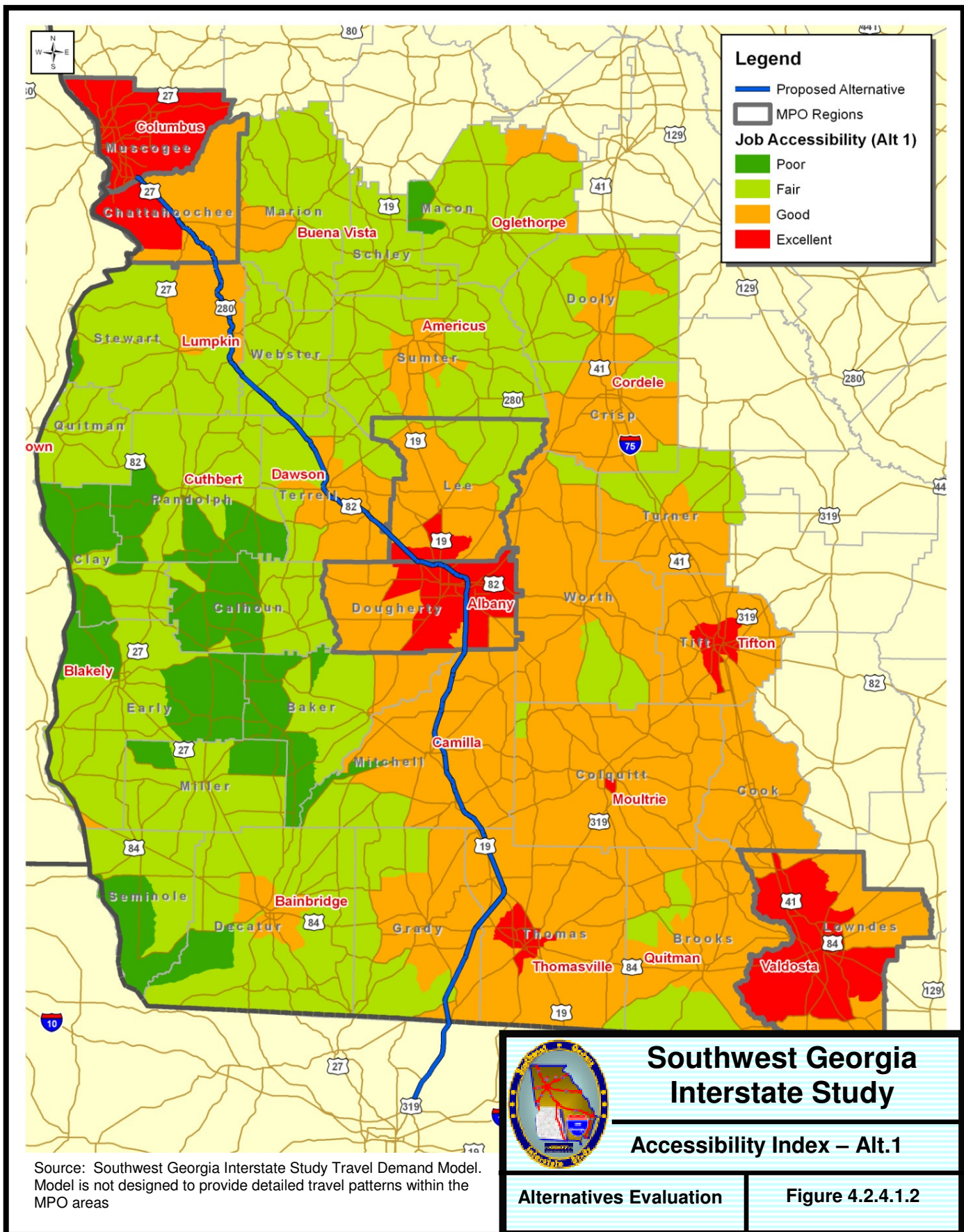
	Accessibility Index				
Alternative	Poor	Fair	Good	Excellent	Total
E+C	17,570	128,258	375,640	501,306	1,022,774
Alt. 1	14,414	115,977	378,498	513,885	1,022,774
Alt. 1A	14,414	108,697	385,778	513,885	1,022,774
Alt. 2	14,505	117,007	364,494	526,768	1,022,774
Alt. 3	17,128	117,886	373,875	513,885	1,022,774
Alt. 3A	17,128	109,032	382,729	513,885	1,022,774
Alt. 4	14,505	118,536	375,754	513,979	1,022,774

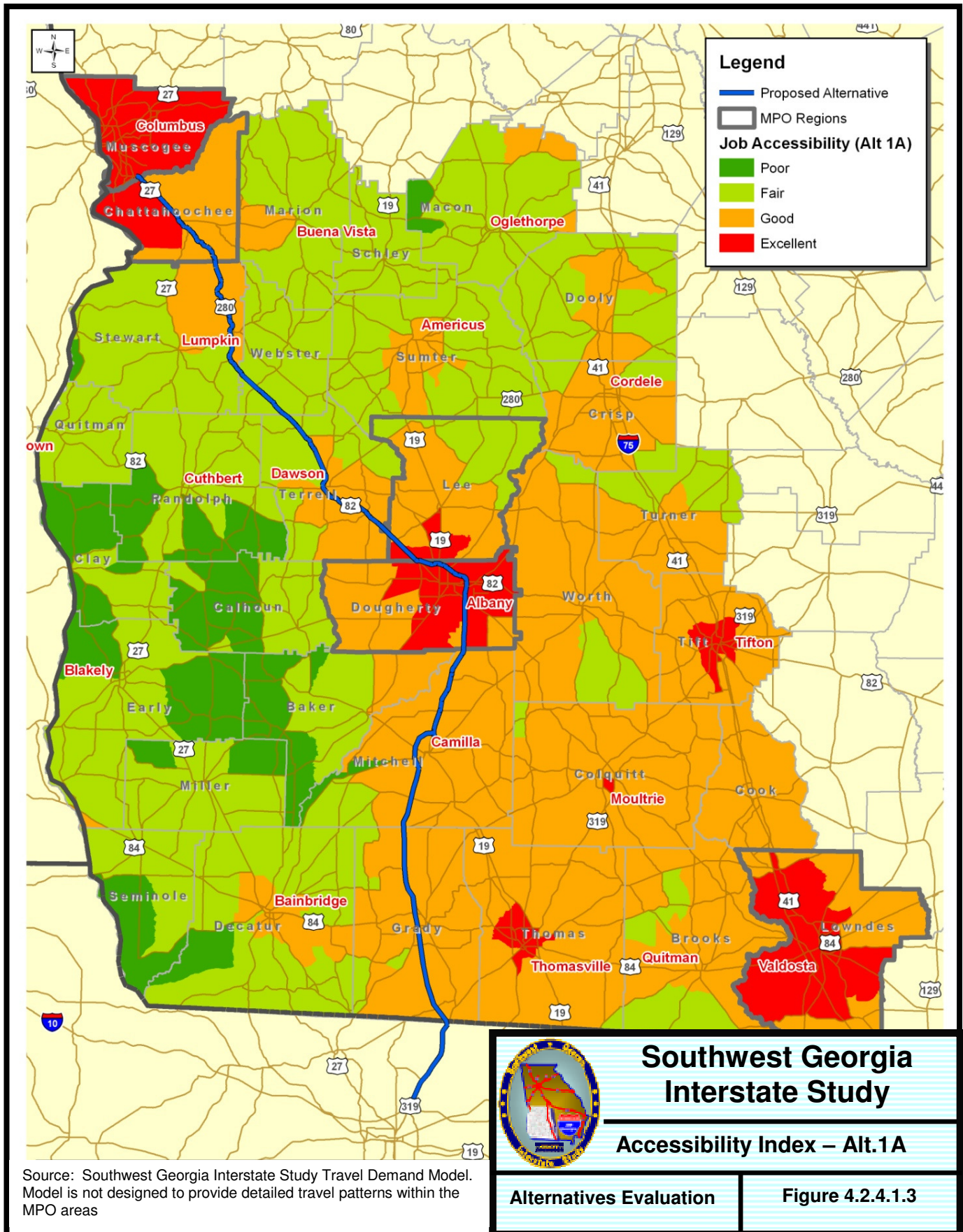
	Percent Change in Accessibility Index				
Alternative	Poor	Fair	Good	Excellent	Total
E+C%	1.7%	12.5%	36.7%	49.0%	100.0%
Alt.1 Δ%	-0.3%	-1.2%	0.3%	1.2%	0.0%
Alt. 1A Δ%	-0.3%	-1.9%	1.0%	1.2%	0.0%
Alt. 2 Δ%	-0.3%	-1.1%	-1.1%	2.5%	0.0%
Alt. 3 Δ%	0.0%	-1.0%	-0.2%	1.2%	0.0%
Alt. 3A Δ%	0.0%	-1.9%	0.7%	1.2%	0.0%
Alt. 4 Δ%	-0.3%	-1.0%	0.0%	1.2%	0.0%

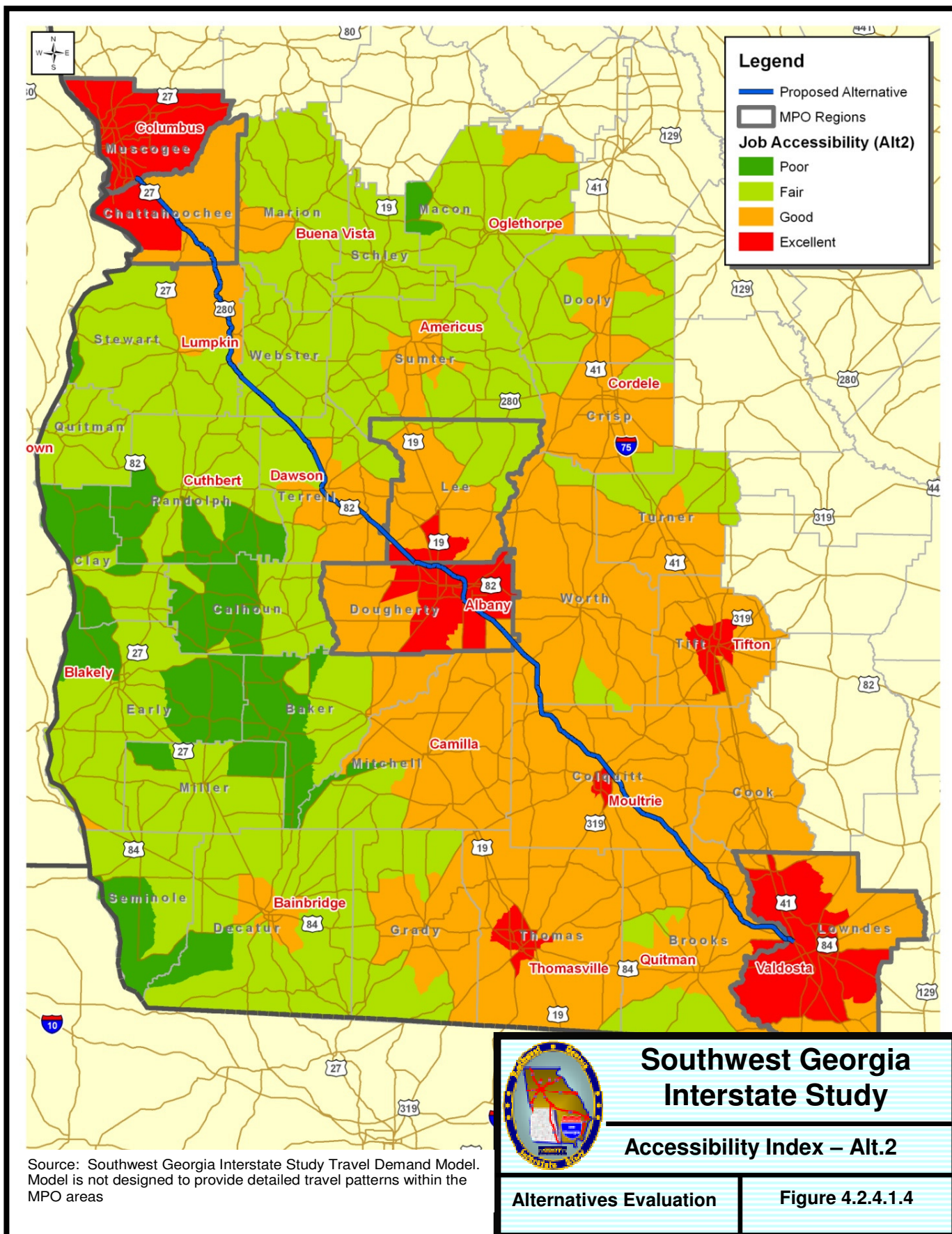
4.2.4.1. Accessibility Index Maps

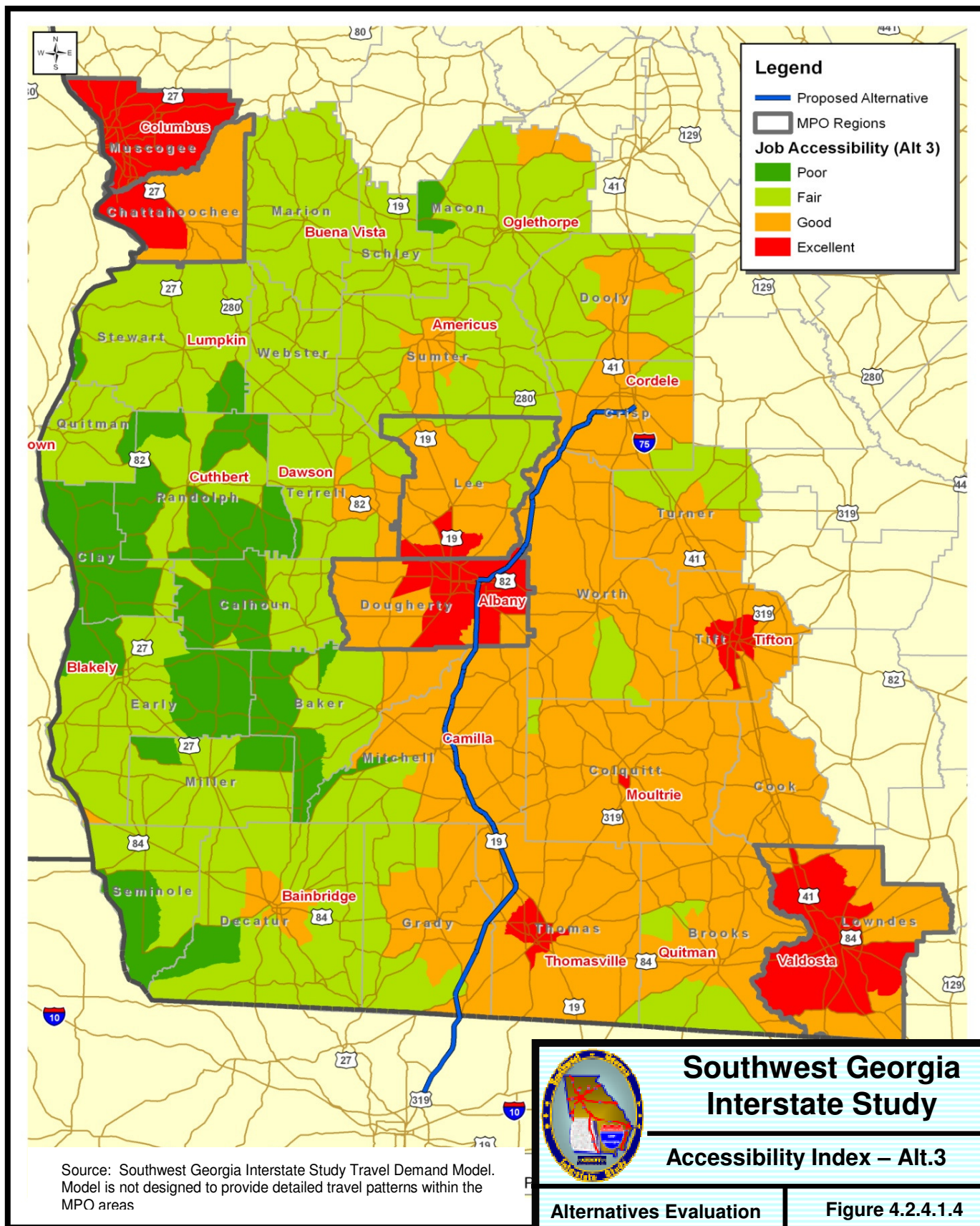
Figures 4.2.4.1.1 through 4.2.4.1.7 illustrate the accessibility index for the E+C and each alternative at the TAZ level. Generally the closer the TAZ is to a given alternative the more likely that the job accessibility index improved.

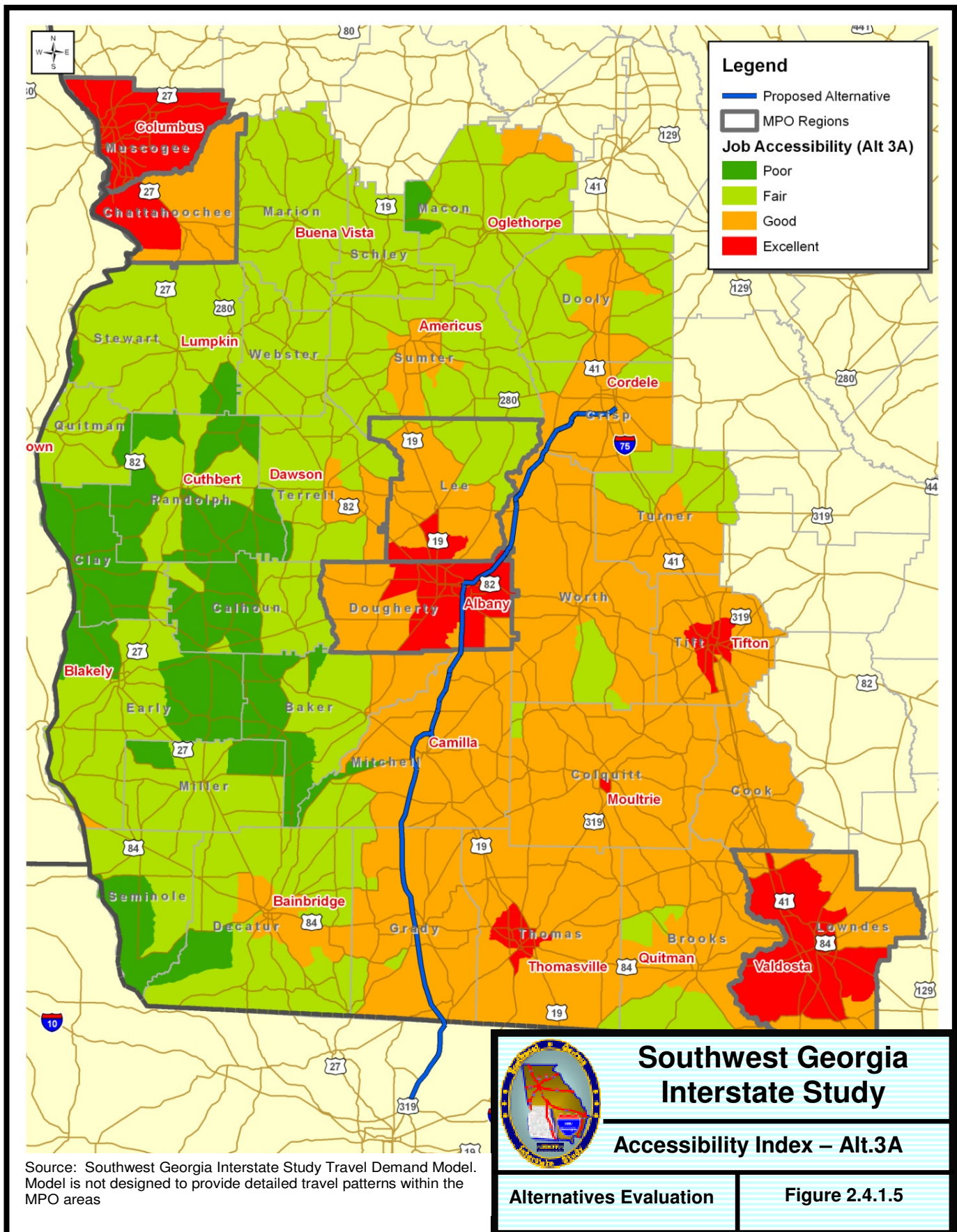


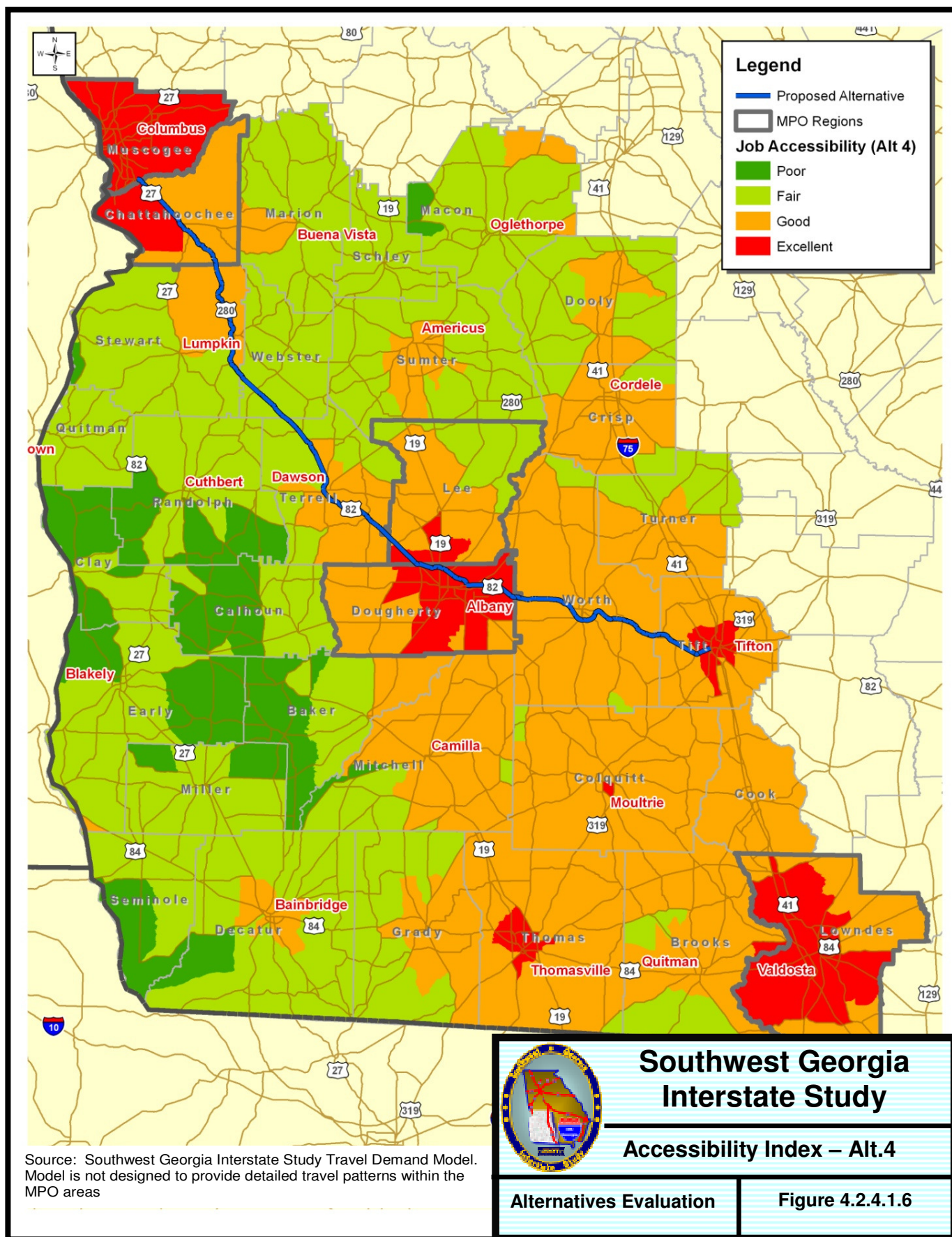














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4.3 Comparative Travel Times between Southwest Georgia Cities

Table 4.3.1 shows the travel time between cities for each of the alternatives. The table is color coded to show relative improvement in travel times between alternatives. Yellow indicates a time savings of 10 to 20 minutes per trip. Green indicates a savings of 20 to 30 minutes per trip. Orange indicates a savings of more than 30 minutes per trip.

As can be seen in the table, travel time savings vary significantly by location and alternative. All of the alternatives produce some travel time savings between cities. Columbus and Valdosta see the most improvement in travel times because they are at the periphery of the study area, and so have the longest trips and travel times to areas within and on the other side of the study area. Blakely has the least improvement in travel times of those cities tabulated, and is furthest from the alternative corridors.



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Table 4.3.1
2040 Travel Time Between Selected Cities by Alternative in Minutes

Travel time in Minutes from Albany, GA to:

Alternative	Albany	Americus	Bainbridge	Blakely	Buena Vista	Camilla	Columbus	Cordele	Cuthbert	Dawson	Georgetown	Lumpkin	Moultrie	Oglethorpe	Quitman	Thomasville	Tifton	Valdosta
E+C	0	51	79	72	86	35	105	45	59	30	89	73	54	80	97	70	57	102
Alt.1	0	50	75	72	85	32	86	44	51	24	80	62	48	79	87	58	54	98
Alt.1A	0	50	70	72	85	32	85	44	51	24	80	62	48	79	93	66	55	98
Alt.2	0	50	78	72	85	35	86	44	51	24	80	62	39	79	78	69	51	77
Alt.3	0	50	75	72	86	32	106	40	59	30	88	72	48	79	87	58	52	96
Alt.3A	0	50	70	72	86	32	105	40	59	30	88	72	48	79	93	66	52	96
Alt.4	0	50	79	72	85	35	86	44	51	24	80	62	47	79	94	70	43	89

Travel time in Minutes from Bainbridge, GA to:

Alternative	Albany	Americus	Bainbridge	Blakely	Buena Vista	Camilla	Columbus	Cordele	Cuthbert	Dawson	Georgetown	Lumpkin	Moultrie	Oglethorpe	Quitman	Thomasville	Tifton	Valdosta
E+C	79	128	0	49	141	47	141	116	79	99	107	101	74	154	78	42	104	101
Alt.1	75	121	0	49	140	47	135	110	78	96	105	100	73	147	78	42	104	100
Alt.1A	70	117	0	49	140	43	134	106	78	92	105	100	73	142	77	41	104	99
Alt.2	78	125	0	49	140	47	135	114	78	97	105	100	73	152	77	42	104	99
Alt.3	75	124	0	49	140	47	140	106	79	99	105	100	74	148	78	43	104	101
Alt.3A	70	119	0	49	140	43	140	101	79	97	105	100	73	143	77	42	104	99
Alt.4	79	127	0	49	140	47	135	116	78	98	105	100	74	153	77	42	104	100

Travel time in Minutes from Blakely, GA to:

Alternative	Albany	Americus	Bainbridge	Blakely	Buena Vista	Camilla	Columbus	Cordele	Cuthbert	Dawson	Georgetown	Lumpkin	Moultrie	Oglethorpe	Quitman	Thomasville	Tifton	Valdosta
E+C	72	102	49	0	104	75	104	113	43	63	70	64	107	128	123	92	126	146
Alt.1	72	100	49	0	103	75	98	113	42	63	69	64	106	127	123	91	123	145
Alt.1A	72	100	49	0	103	75	98	113	42	63	69	64	106	127	122	91	124	144
Alt.2	72	100	49	0	103	75	98	113	42	63	69	64	106	127	122	91	120	142
Alt.3	72	101	49	0	103	75	104	108	42	63	69	64	106	128	123	92	121	146
Alt.3A	72	101	49	0	103	75	103	108	42	63	69	64	106	128	122	91	121	145
Alt.4	72	100	49	0	103	75	98	113	42	63	69	64	106	127	123	91	112	145

Travel time in Minutes from Columbus, GA to:

Alternative	Albany	Americus	Bainbridge	Blakely	Buena Vista	Camilla	Columbus	Cordele	Cuthbert	Dawson	Georgetown	Lumpkin	Moultrie	Oglethorpe	Quitman	Thomasville	Tifton	Valdosta
E+C	105	86	141	104	50	141	0	121	69	76	71	55	158	87	198	171	156	203
Alt.1	86	74	135	98	45	115	0	106	64	65	70	49	131	84	167	138	134	179
Alt.1A	85	74	134	98	45	114	0	106	64	64	70	49	130	84	172	145	134	179
Alt.2	86	74	135	98	45	120	0	106	64	65	70	49	122	84	159	150	131	159
Alt.3	106	83	140	104	50	137	0	115	70	76	70	55	152	86	189	161	152	198
Alt.3A	105	82	140	103	50	136	0	114	69	76	70	55	152	86	194	167	152	198
Alt.4	86	74	135	98	45	120	0	106	64	65	70	49	131	84	176	151	121	168



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Travel time in Minutes from Cordele, GA to:

Alternative	Albany	Americus	Bainbridge	Blakely	Buena Vista	Camilla	Columbus	Cordele	Cuthbert	Dawson	Georgetown	Lumpkin	Moultrie	Oglethorpe	Quitman	Thomasville	Tifton	Valdosta
E+C	45	42	116	113	81	75	121	0	93	65	122	93	67	47	99	99	39	87
Alt.1	44	38	110	113	78	70	106	0	87	59	113	84	66	46	97	94	38	85
Alt.1A	44	38	106	113	78	70	106	0	87	59	113	84	66	46	98	99	38	85
Alt.2	44	38	114	113	78	74	106	0	87	59	113	84	66	46	97	99	38	84
Alt.3	40	38	106	108	78	65	115	0	84	56	113	85	66	47	98	89	38	85
Alt.3A	40	38	101	108	78	65	114	0	84	56	113	85	67	47	98	97	38	85
Alt.4	44	38	116	113	78	76	106	0	87	59	113	84	66	46	99	99	38	87

Travel time in Minutes from Thomasville, GA to:

Alternative	Albany	Americus	Bainbridge	Blakely	Buena Vista	Camilla	Columbus	Cordele	Cuthbert	Dawson	Georgetown	Lumpkin	Moultrie	Oglethorpe	Quitman	Thomasville	Tifton	Valdosta
E+C	70	117	42	92	151	39	171	99	120	100	147	138	33	141	31	0	62	53
Alt.1	58	103	42	91	138	36	138	94	104	80	133	115	33	131	32	0	62	52
Alt.1A	66	111	41	91	145	39	145	99	111	87	140	122	33	138	31	0	62	52
Alt.2	69	115	42	91	149	39	150	99	115	92	144	126	33	140	31	0	62	52
Alt.3	58	106	43	92	140	36	161	89	114	89	143	128	33	132	31	0	62	52
Alt.3A	66	113	42	91	147	39	167	97	119	96	146	134	33	139	31	0	62	52
Alt.4	70	116	42	91	150	39	151	99	116	93	145	127	33	140	31	0	62	52

Travel time in Minutes from Tifton, GA to:

Alternative	Albany	Americus	Bainbridge	Blakely	Buena Vista	Camilla	Columbus	Cordele	Cuthbert	Dawson	Georgetown	Lumpkin	Moultrie	Oglethorpe	Quitman	Thomasville	Tifton	Valdosta
E+C	57	80	104	126	119	73	156	39	112	86	141	125	33	82	64	62	0	50
Alt.1	54	76	104	123	115	73	134	38	100	75	128	111	33	80	63	62	0	49
Alt.1A	55	76	104	124	115	73	134	38	100	76	129	111	33	80	64	62	0	49
Alt.2	51	76	104	120	115	73	131	38	96	72	125	107	33	80	63	62	0	48
Alt.3	52	76	104	121	116	73	152	38	107	79	135	120	33	81	63	62	0	49
Alt.3A	52	76	104	121	116	73	152	38	107	79	135	120	33	81	64	62	0	49
Alt.4	43	76	104	112	115	72	121	38	87	63	115	98	33	81	65	62	0	51

Travel time in Minutes from Valdosta, GA to:

Alternative	Albany	Americus	Bainbridge	Blakely	Buena Vista	Camilla	Columbus	Cordele	Cuthbert	Dawson	Georgetown	Lumpkin	Moultrie	Oglethorpe	Quitman	Thomasville	Tifton	Valdosta
E+C	102	124	101	146	165	93	203	87	157	132	187	171	58	128	26	53	50	0
Alt.1	98	119	100	145	160	91	179	85	144	120	173	155	54	126	26	52	49	0
Alt.1A	98	119	99	144	161	92	179	85	144	120	173	155	55	126	26	52	49	0
Alt.2	77	117	99	142	157	87	159	84	124	100	153	135	46	125	26	52	48	0
Alt.3	96	120	101	146	161	91	198	85	152	125	181	165	54	127	26	52	49	0
Alt.3A	96	120	99	145	162	92	198	85	152	125	181	165	54	127	26	52	49	0
Alt.4	89	121	100	145	162	92	168	87	133	109	162	144	53	128	26	52	51	0

Key

Minutes Saved	10		20		30	
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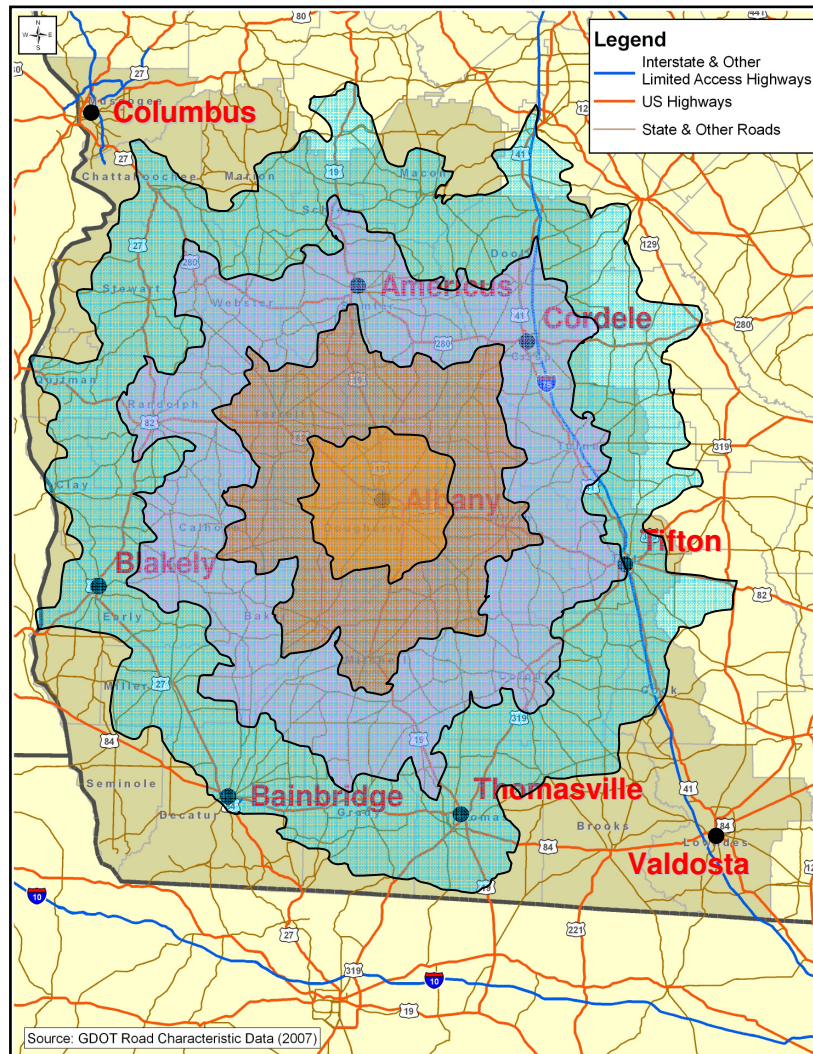
Evaluation of Travel Patterns and Demand Alternatives Evaluation Technical Memorandum

4.4 Travel Time Isochrones for Albany

The following graphics depict the change in travel times from Albany for each of the alternatives compared to the 2040 E+C network. The graphics show the relative improvement in travel times from Albany to other locations in southwest Georgia.

As can be seen in the above graphics, improvements in travel time from the E+C alternative generally follow the alignment of the new interstate in each alternative. Alternatives 1 and 3 show the most improvement in travel times from Albany towards Tallahassee, FL. Alternative 2 shows the most improvement in travel times between Albany and Valdosta. Alternative 4 shows the most improvement in travel times from Albany to I-75 and areas east of I-75. Alternatives 1, 2 and 4 show improved travel times between Albany and Columbus.

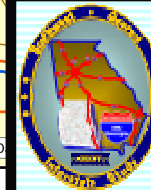
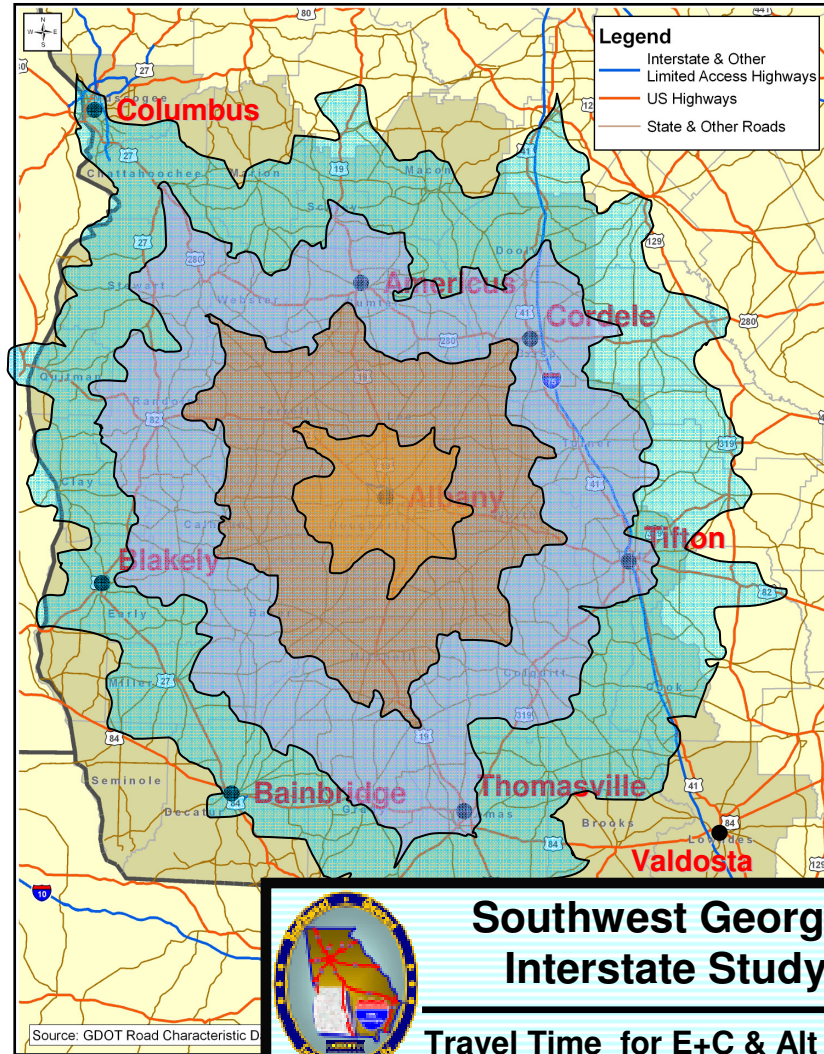
Travel Time from Albany – E+C



Minutes



Travel Time from Albany – Alternative 1



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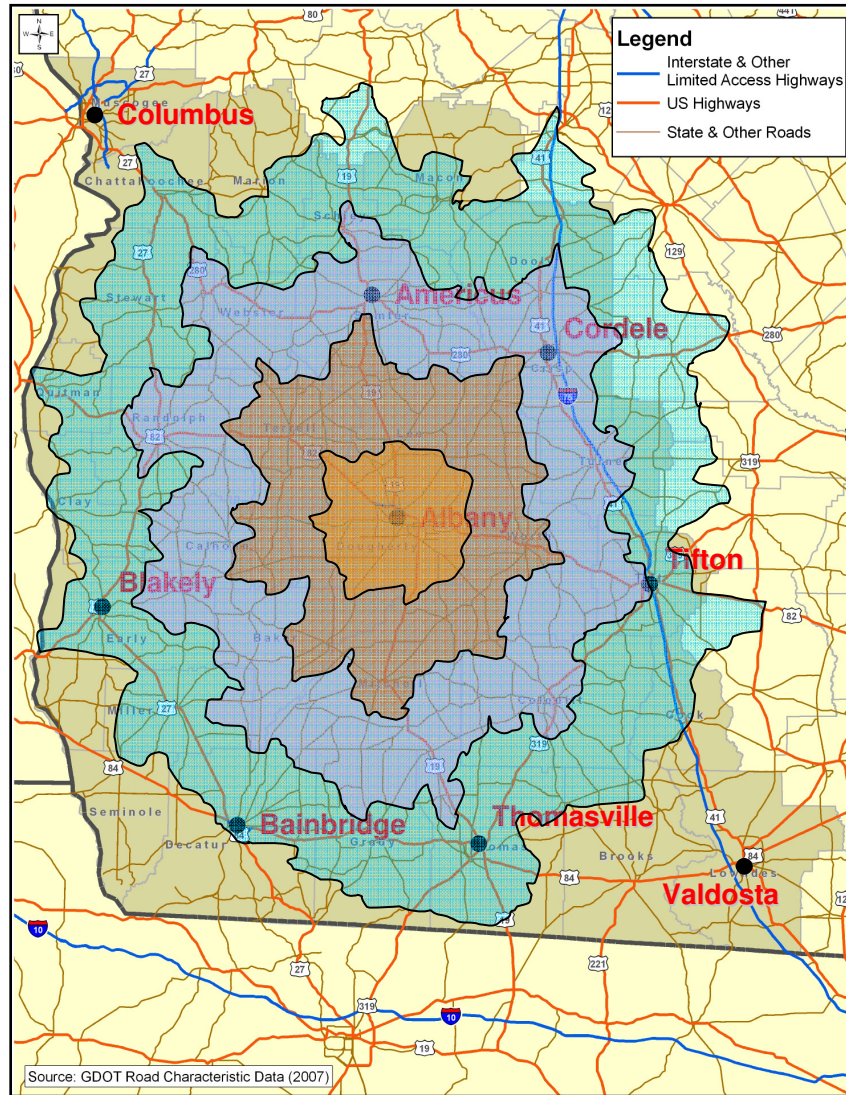
Travel Time for E+C & Alt 1

Alternatives Evaluation

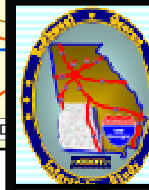
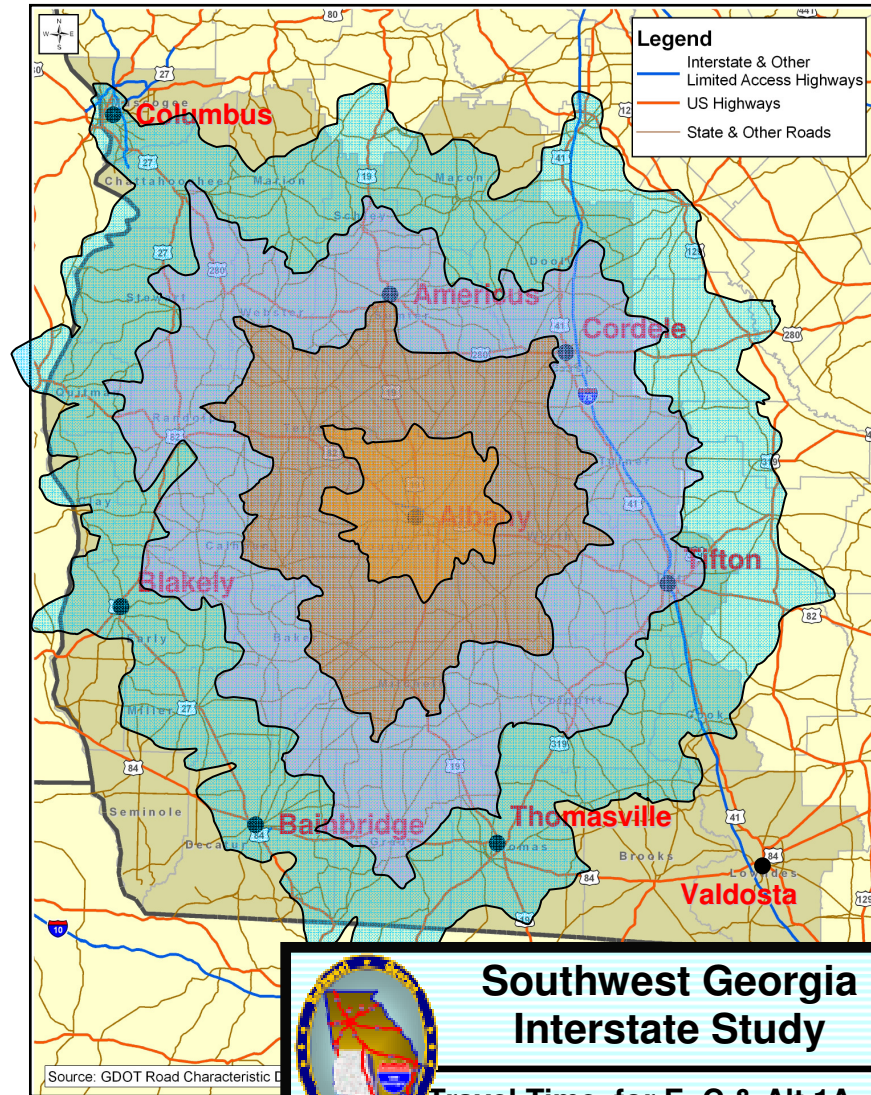
Figure 4.4.1

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Travel Time from Albany – E+C



Travel Time from Albany – Alternative 1A



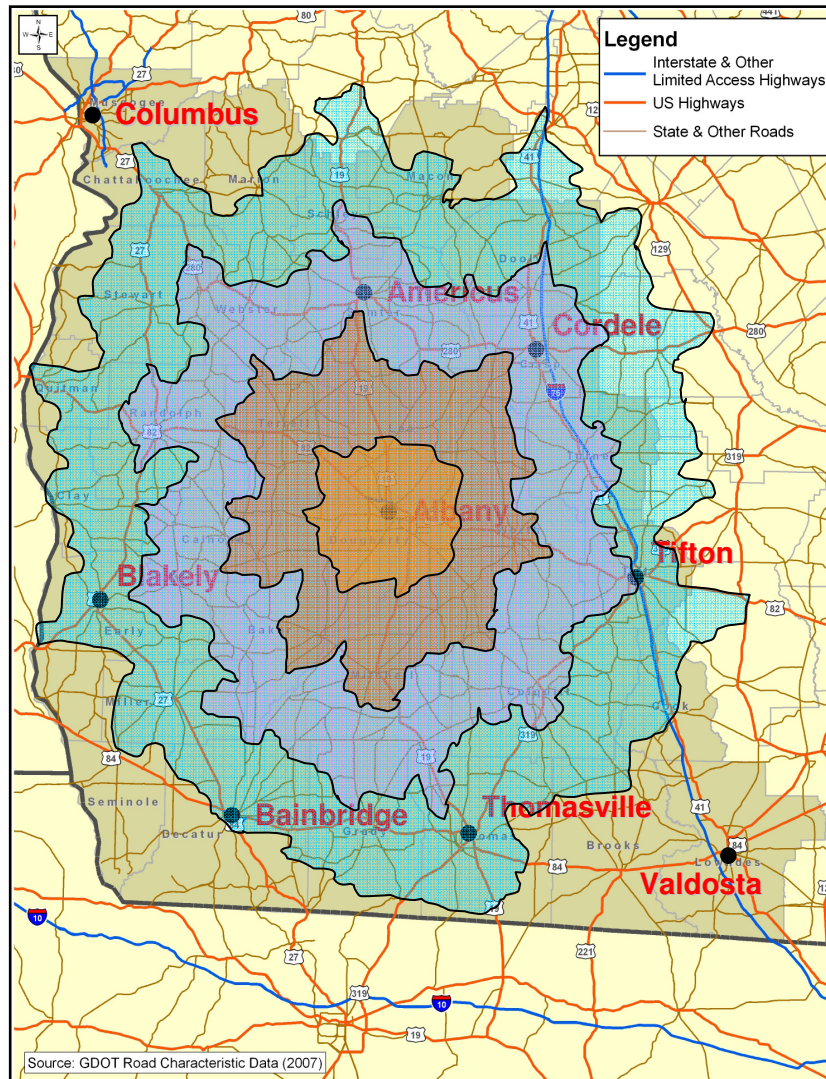
Southwest Georgia Interstate Study

Travel Time for E+C & Alt 1A

Alternatives Evaluation

Figure 4.4.2

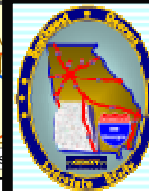
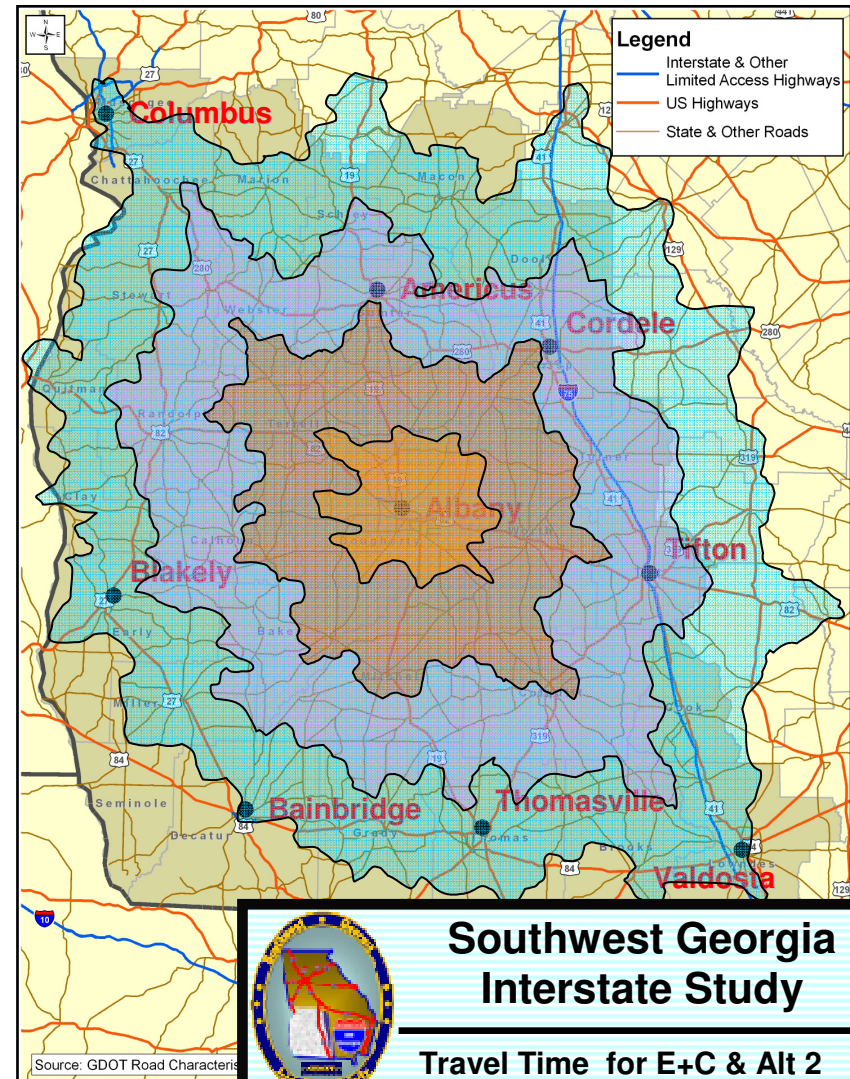
Travel Time from Albany – E+C



Minutes



Travel Time from Albany – Alternative 2



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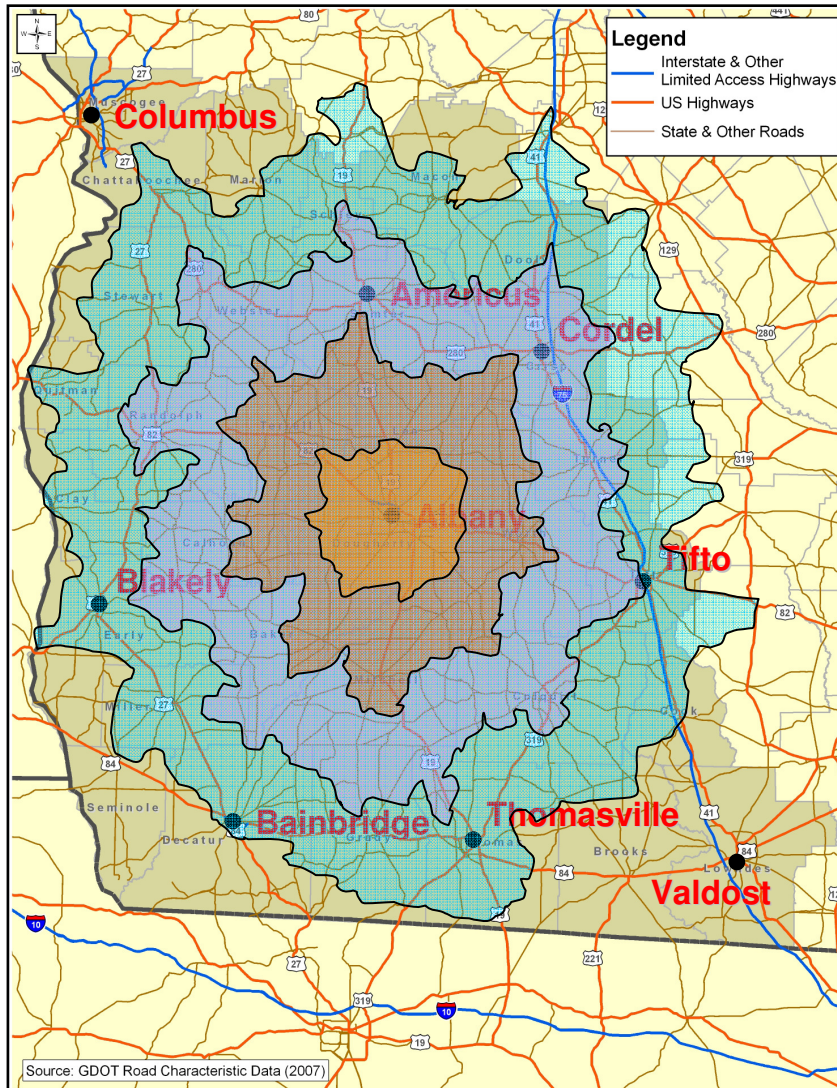
Travel Time for E+C & Alt 2

Alternatives Evaluation

Figure 4.4.3

Southwest Georgia Interstate Study

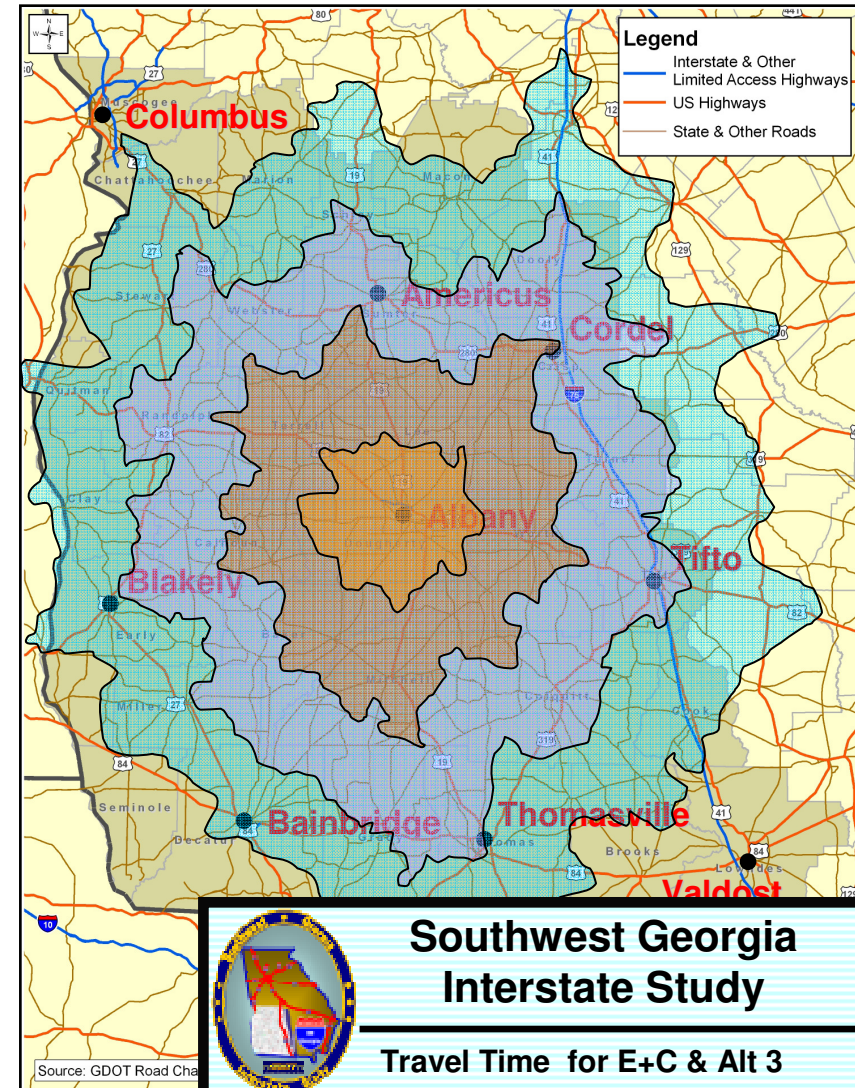
Travel Time from Albany – E+C



Minutes



Travel Time from Albany – Alternative 3



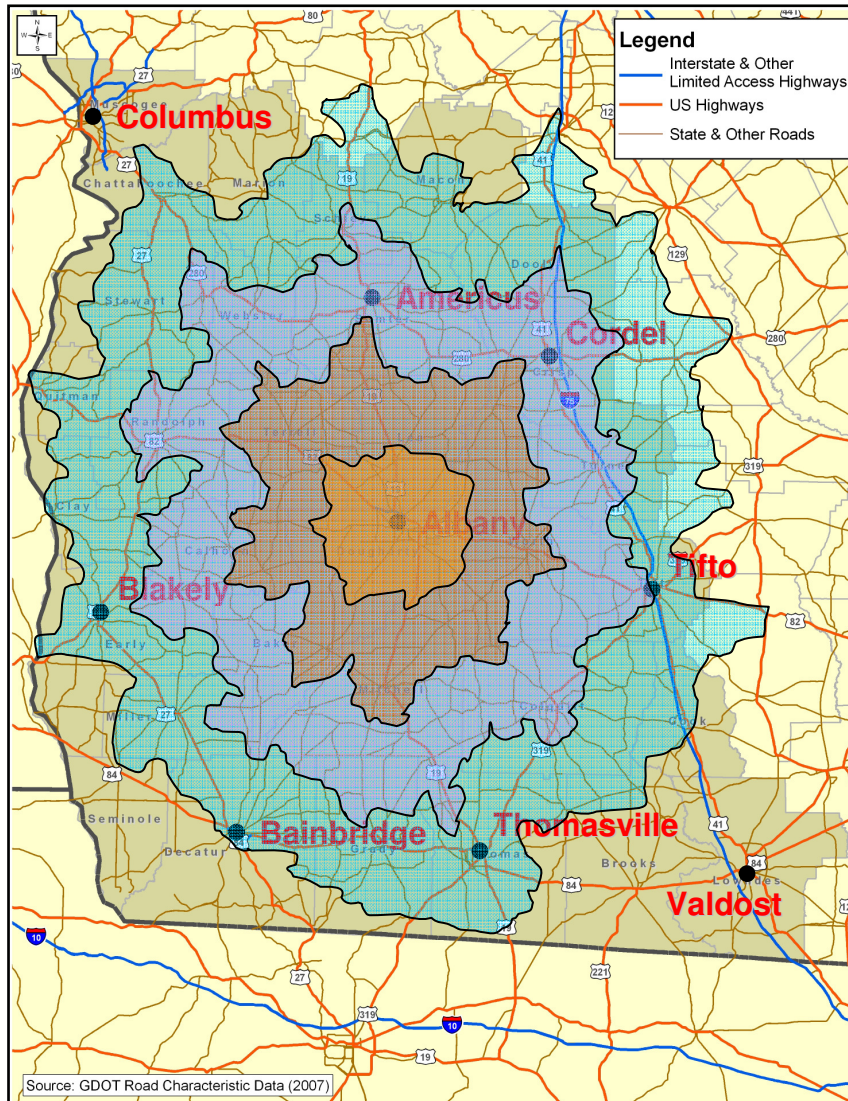
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Travel Time for E+C & Alt 3

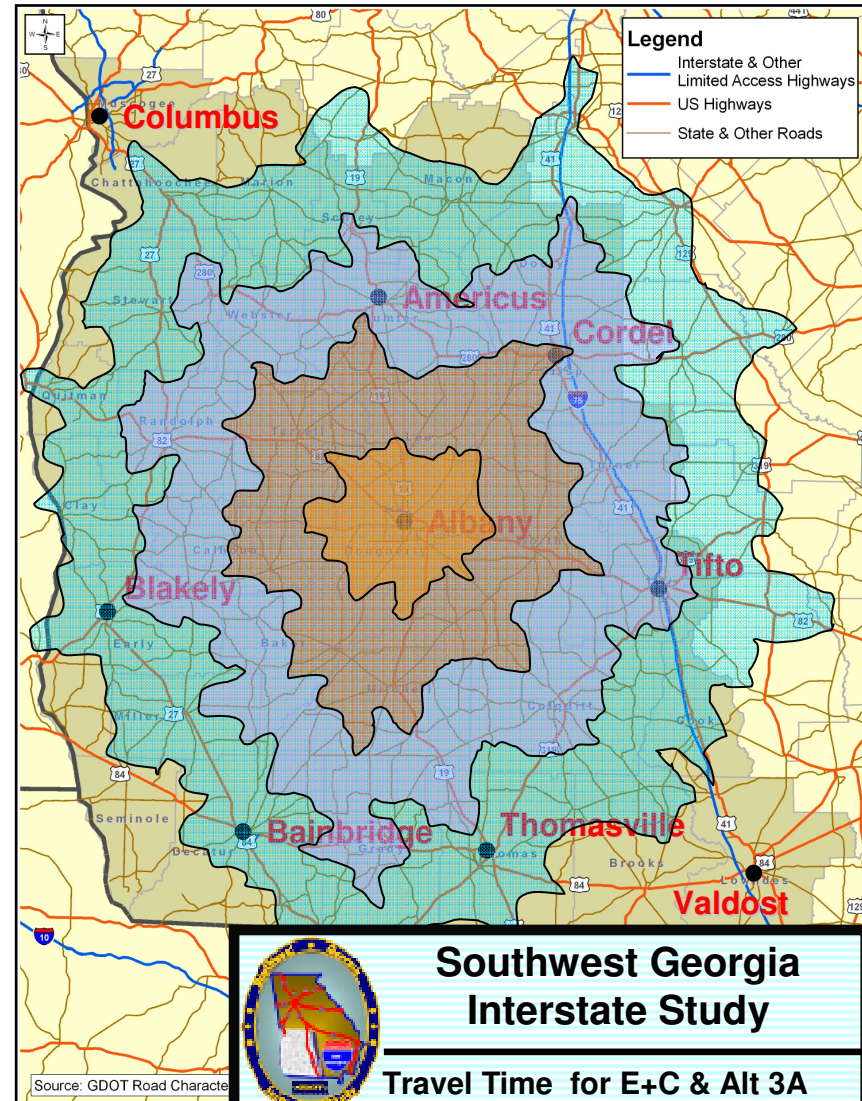
Alternatives Evaluation

Figure 4.4.4

Travel Time from Albany – E+C



Travel Time from Albany – Alternative 3A



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Travel Time for E+C & Alt 3A

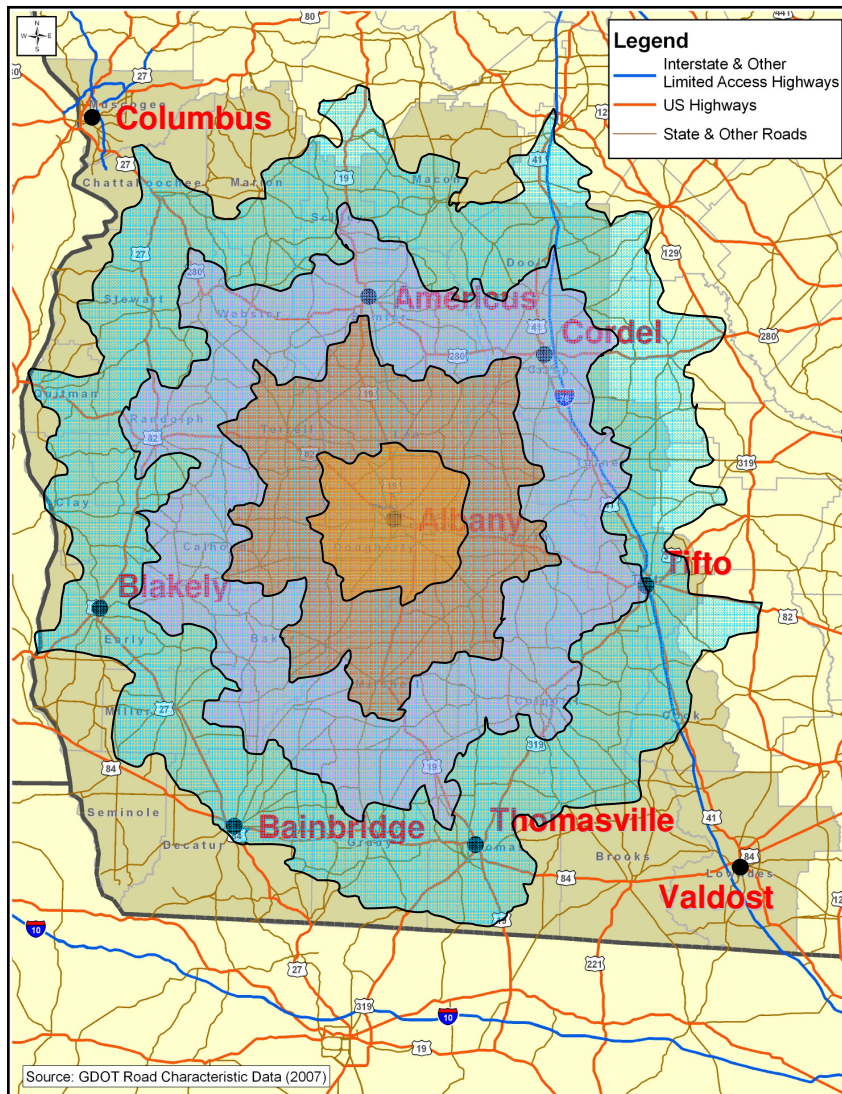
Alternatives Evaluation

Figure 4.4.5

<= 20
 < 20 - 40
 < 40 - 60
 < 60 - 80

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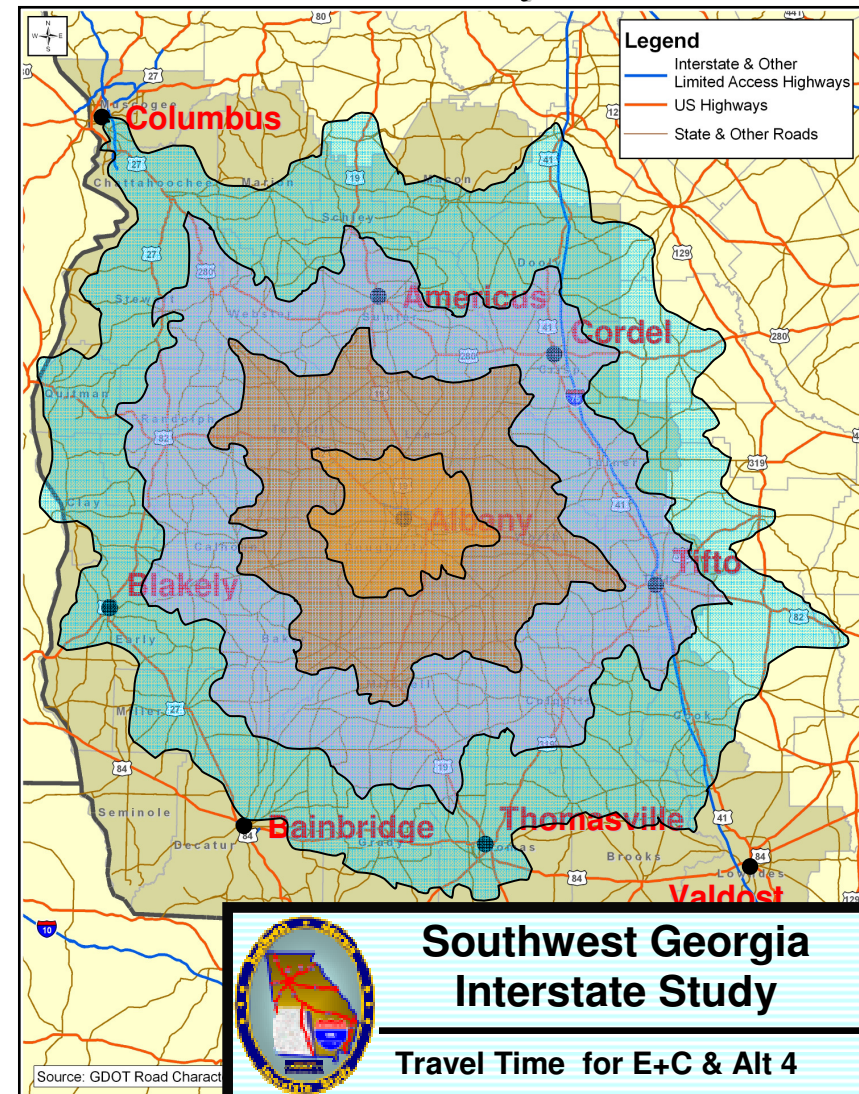
Travel Time from Albany – E+C



Minutes

<= 20
 < 20 - 40
 < 40 - 60
 < 60 - 80

Travel Time from Albany – Alternative 4



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Travel Time for E+C & Alt 4

Alternatives Evaluation

Figure 4.4.6

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4.5 Select Link Analysis

Using the SWGIS travel demand model, selected sections of roadway were analyzed for each alternative in comparison to the E+C network. These sections of roadway are called “select links”. “Select link” analysis allows display of the travel shed – where trips are coming from or destined to – for a specific link. This type of analysis allows an understanding of how travel patterns change for a given section of road in relation to each of the proposed alternatives.

Eight (8) select link locations are displayed for each of the six (6) alternatives. This allows some understanding of how travel patterns are affected by each alternative on other roads within the study area. The select link locations are:

- SR 520 between Columbus and Albany
- SR 133 between Albany and Valdosta
- US 19 between Albany and Camilla
- I-75 between Tifton and Valdosta
- I-75 between Cordele and Tifton
- I-75 between Valdosta and the Florida state line
- SR 300 between Cordele and Albany
- US 82 between Albany and Tifton

The select link locations are depicted in Figure 4.5.1.

All alternatives other than E+C show some increase in trips coming through the study area as a result of the new interstate alternatives, and some rerouting of trips within the study area, as trips take advantage of the higher and consistent speeds and design of the proposed facility.

Table 1.8 presents information on total volumes and truck volumes for each of the select link locations under each of the alternatives. Boxes that are highlighted in yellow show where the select link volume is a combined corridor volume for the existing facility and the new interstate facility, in that alternative, in instances where the old and new roads run in parallel.



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4.6 Select Link Travel Patterns – Total Daily Volumes

As can be seen in Table 4.6.1, all alternatives reduce traffic volumes on I-75 between Cordele and Tifton. All alternatives increase volumes on SR 520, SR 133, US 19, and SR 300 but generally with those alternatives in which the proposed interstate runs parallel to the facility generating the highest increase in daily total traffic volumes.

SR133 sees the highest increase in the percentage of daily total traffic; except under Alternative 4. Traffic volumes within the SR133 corridor increase by over 400% -- to 31,300 from 6,000 – under Alternative 2.

Alternative 2 also sees the largest estimated increase in travel on SR520 between Columbus and Albany, 63.6%, and produces the largest reduction in modeled average daily volumes on I-75 between Tifton and Valdosta of 28.3%. Alternative 2 also produces the largest estimated reduction of 52.0% in average daily volumes on US82 between Albany and Tifton.

Total model daily traffic volumes on SR 520 increase by 2% to 64%, with Alternatives 1, 2 and 4 all producing increases over 47.5%, while Alternative 3 produces estimated increases of only 2 to 3.5% over the E+C alternative.

Alternatives 1 and 3 produce the largest estimated increase in modeled volume in the US 19 corridor, consistent with the alignment of the proposed interstate for those alternatives. Alternative 3 produces the largest estimated increase in modeled volume in the SR300 corridor, consistent with the alignment of the proposed interstate for these alternatives. Alternative 3 also produces the only decrease in model volumes for I-75 between Valdosta and the Florida state line.

Alternative 4 is the only alternative under which modeled daily volumes increase on US 82 between Albany and Tifton, again, consistent with the alignment of the proposed interstate facility for this alternative.

4.7 Select Link Travel Patterns – Total Daily Truck Volumes

The patterns for 2040 modeled truck travel are generally consistent with those of modeled 2040 total daily volumes, however there are some differences. As can be seen in Table 4.6.2, the increase in truck volumes on SR 133 is higher than for passenger cars for all alternatives except Alternative 2, suggesting higher demand in this corridor for truck trips. US 19 shows lower percentages for increase in modeled truck trips under all alternatives than for total modeled daily volume, and shows a slight reduction in truck trips under Alternative 2. Similarly, SR 300 shows a lower increase in



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modeled truck trips under all alternatives than for modeled total daily volumes, except under Alternative 4. As with modeled daily total volume, on I-75 north of Valdosta modeled truck trips decline under all alternatives, particularly for the portion of I-75 between Tifton and Valdosta. All alternatives, except Alternative 4, result in a reduction in modeled truck trips for US 82 between Albany and Tifton.



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Table 4.6.1
Select Link Patterns by Alternative for All Vehicles

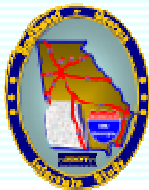
Select Link	Alternative E+C	Alt. 1	Alt. 1A	Alt. 2	Alt. 3	Alt. 3A	Alt. 4
SR520 between Columbus and Albany	19,800	29,800	29,200	32,400	20,500	20,200	30,100
SR133 between Albany and Valdosta	6,000	13,600	13,600	31,300	11,100	11,600	6,500
US19 between Albany and Camilla	18,400	28,300	28,200	18,400	26,900	27,600	18,900
I-75 between Tifton and Valdosta	63,600	57,400	58,600	45,600	57,900	59,100	66,600
I-75 between Cordele and Tifton	54,100	46,700	47,300	47,300	49,900	51,100	48,700
I-75 between Valdosta and Florida	75,400	75,400	75,800	79,200	74,300	75,000	77,100
SR300 between Cordele and Albany	15,800	19,200	19,200	16,300	21,800	21,300	16,000
US82 between Albany and Tifton	22,300	20,000	20,700	10,700	16,600	16,600	32,100

Select Link	Difference from E+C E+C	Alt. 1	Alt. 1A	Alt. 2	Alt. 3	Alt. 3A	Alt. 4
SR520 between Columbus and Albany	0	10,000	9,400	12,600	700	400	10,300
SR133 between Albany and Valdosta	0	7,600	7,600	25,300	5,100	5,600	500
US19 between Albany and Camilla	0	9,900	9,800	0	8,500	9,200	500
I-75 between Tifton and Valdosta	0	(6,200)	(5,000)	(18,000)	(5,700)	(4,500)	3,000
I-75 between Cordele and Tifton	0	(7,400)	(6,800)	(6,800)	(4,200)	(3,000)	(5,400)
I-75 between Valdosta and Florida	0	0	400	3,800	(1,100)	(400)	1,700
SR300 between Cordele and Albany	0	3,400	3,400	500	6,000	5,500	200
US82 between Albany and Tifton	0	(2,300)	(1,600)	(11,600)	(5,700)	(5,700)	9,800

Select Link	% Change from E+C E+C	Alt. 1	Alt. 1A	Alt. 2	Alt. 3	Alt. 3A	Alt. 4
SR520 between Columbus and Albany	0.0%	50.5%	47.5%	63.6%	3.5%	2.0%	52.0%
SR133 between Albany and Valdosta	0.0%	126.7%	126.7%	421.7%	85.0%	93.3%	8.3%
US19 between Albany and Camilla	0.0%	53.8%	53.3%	0.0%	46.2%	50.0%	2.7%
I-75 between Tifton and Valdosta	0.0%	-9.7%	-7.9%	-28.3%	-9.0%	-7.1%	4.7%
I-75 between Cordele and Tifton	0.0%	-13.7%	-12.6%	-12.6%	-7.8%	-5.5%	-10.0%
I-75 between Valdosta and Florida	0.0%	0.0%	0.5%	5.0%	-1.5%	-0.5%	2.3%
SR300 between Cordele and Albany	0.0%	21.5%	21.5%	3.2%	38.0%	34.8%	1.3%
US82 between Albany and Tifton	0.0%	-10.3%	-7.2%	-52.0%	-25.6%	-25.6%	43.9%

* note: when a select link is within an alternatives corridor the volumes reflect both the existing facility and the new interstate

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Table 4.6.2
Select Link Patterns by Alternative for Trucks

Select Link

SR520 between Columbus and Albany
SR133 between Albany and Valdosta
US19 between Albany and Camilla
I-75 between Tifton and Valdosta
I-75 between Cordele and Tifton
I-75 between Valdosta and Florida
SR300 between Cordele and Albany
US82 between Albany and Tifton

Alternative

E+C	Alt. 1	Alt. 1A	Alt. 2	Alt. 3	Alt. 3A	Alt. 4
8,500	12,700	12,300	14,000	9,500	9,200	13,000
2,700	7,400	6,900	13,600	6,300	6,300	2,900
4,300	6,200	5,300	4,200	5,100	4,900	4,400
17,900	14,500	15,200	11,000	14,600	14,600	20,100
13,400	12,200	12,400	12,100	13,200	13,300	12,200
21,500	21,500	22,100	24,100	21,500	21,400	22,800
3,200	3,400	3,300	3,300	3,700	3,600	3,300
8,500	6,300	6,900	3,000	5,100	5,000	12,500

Select Link

SR520 between Columbus and Albany
SR133 between Albany and Valdosta
US19 between Albany and Camilla
I-75 between Tifton and Valdosta
I-75 between Cordele and Tifton
I-75 between Valdosta and Florida
SR300 between Cordele and Albany
US82 between Albany and Tifton

Difference from E+C

E+C	Alt. 1	Alt. 1A	Alt. 2	Alt. 3	Alt. 3A	Alt. 4
0	4,200	3,800	5,500	1,000	700	4,500
0	4,700	4,200	10,900	3,600	3,600	200
0	1,900	1,000	(100)	800	600	100
0	(3,400)	(2,700)	(6,900)	(3,300)	(3,300)	2,200
0	(1,200)	(1,000)	(1,300)	(200)	(100)	(1,200)
0	0	600	2,600	0	(100)	1,300
0	200	100	100	500	400	100
0	(2,200)	(1,600)	(5,500)	(3,400)	(3,500)	4,000

Select Link

SR520 between Columbus and Albany
SR133 between Albany and Valdosta
US19 between Albany and Camilla
I-75 between Tifton and Valdosta
I-75 between Cordele and Tifton
I-75 between Valdosta and Florida
SR300 between Cordele and Albany
US82 between Albany and Tifton

% Change from E+C

E+C	Alt. 1	Alt. 1A	Alt. 2	Alt. 3	Alt. 3A	Alt. 4	
	0.0%	49.4%	44.7%	64.7%	11.8%	8.2%	52.9%
	0.0%	174.1%	155.6%	403.7%	133.3%	133.3%	7.4%
	0.0%	44.2%	23.3%	-2.3%	18.6%	14.0%	2.3%
	0.0%	-19.0%	-15.1%	-38.5%	-18.4%	-18.4%	12.3%
	0.0%	-9.0%	-7.5%	-9.7%	-1.5%	-0.7%	-9.0%
	0.0%	0.0%	2.8%	12.1%	0.0%	-0.5%	6.0%
	0.0%	6.3%	3.1%	3.1%	15.6%	12.5%	3.1%
	0.0%	-25.9%	-18.8%	-64.7%	-40.0%	-41.2%	47.1%

* note: when a select link is within an alternatives corridor the volumes reflect both the existing facility and the new interstate

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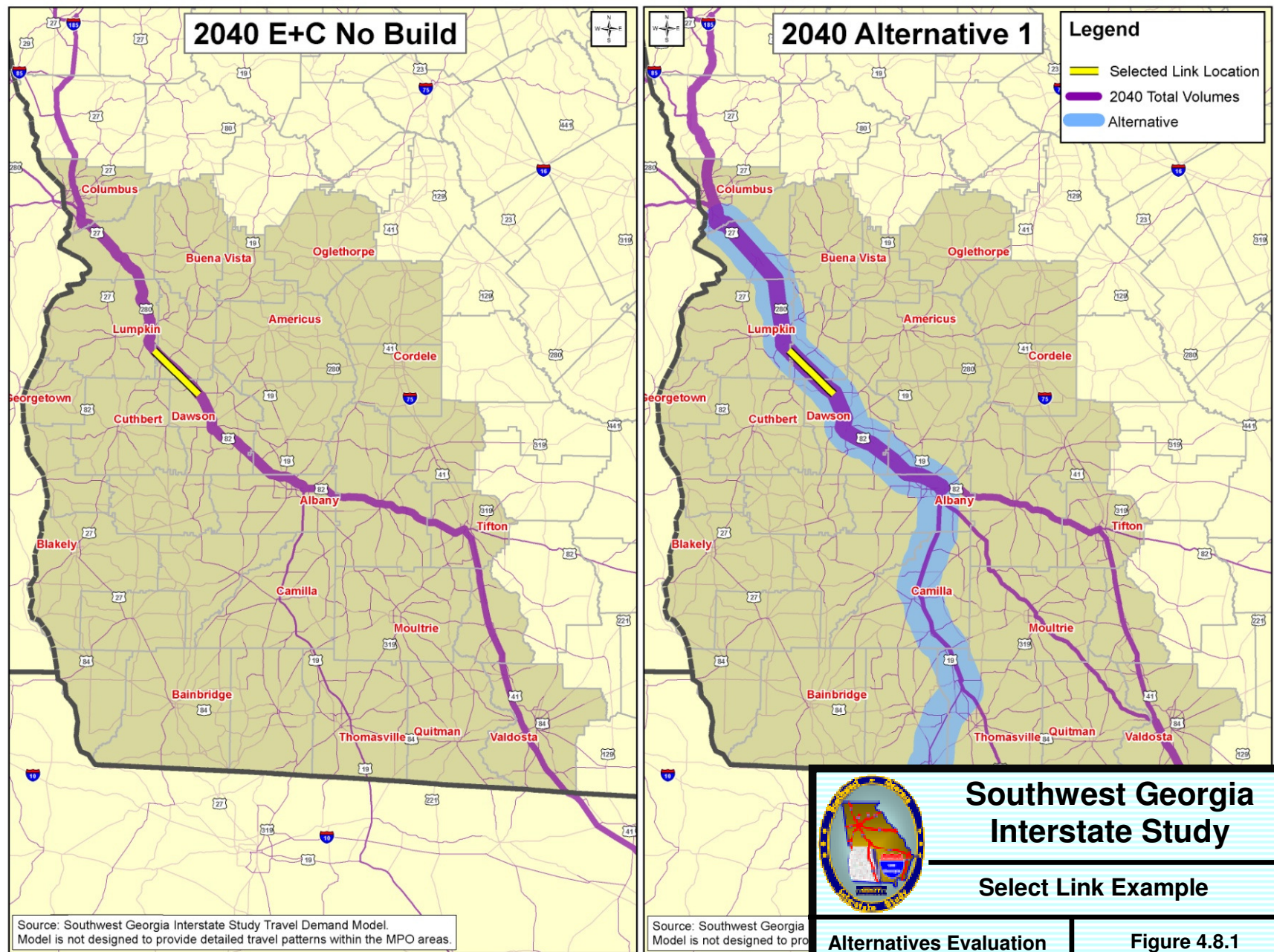
4.8 Select Link Travel Patterns – Maps

Figure 4.8.1 shows a select link, and both the 2040 E+C pattern of travel for that link and the estimated travel pattern for the same link under an alternative. In addition to the volume on the select link, when the link is parallel to a proposed interstate alternative, the volume shown is the sum of the existing link and the new interstate facility. Several locations on other facilities have been highlighted to show the associated change in trips on those facilities that use the select link.

For example, in looking at a select link on SR 520 between Columbus and Albany we see that in the E+C network it has a daily total volume of 19,100 vehicles of which 8,500 are trucks. This grows by 56% to an estimated 29,800 total vehicles and 12,700 trucks as a result of the new interstate facility in Alternative 1.

Looking at the highlighted locations on other facilities we see that there is an increase of 4,800 vehicles using the select link from US 19, an increase of 6,850 using the select link from SR 133, and a decrease of 1,600 vehicles using the select link from US 82. From this we can presume that the new interstate facility in Alternative 1 shifts some trips away from US 82 east of Albany, while increasing traffic on US 19 and SR 133 that use SR 520 between Columbus and Albany.

For a complete set of all 48 select link analysis graphics, and summary information describing the relevant changes from the E+C network for each select link location for each alternative, see Appendix F.





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4.9 Crash Analysis

Table 4.9.1 provides the results of a crash analysis for each of the alternative networks versus the 2040 E+C network. The analysis shows the expected number of accidents by type of accident: fatal, injury, and property damage, for the various road types. The analysis is based on average crash rates per VMT for each road type. The crash rates applied were obtained from GDOT and are for 2006, the most recent available data.

The results show that total crashes decline slightly for all alternatives versus the E+C. However, there is more expected reduction in injury and property damage crashes than for fatalities. Alternative 4 produces the largest expected decline in crashes from the E+C.

Table 4.9.1
2040 Estimated Crashes by Type by Facility Type by Alternative

Annual Average Fatal Crashes								
		EC	Alt 1	Alt 1A	Alt 2	Alt 3	Alt 3A	Alt 4
Rural	Interstates	6	14	14	16	10	10	14
	Principal Arterials	26	15	16	15	21	22	14
	Minor Arterials	13	17	16	12	16	15	14
	Major Collectors	10	10	10	10	10	10	10
	Minor Collectors	0	0	0	0	0	0	0
	Locals	0	0	0	0	0	0	0
	Total	55	55	56	53	56	57	52
Urban	Interstates	4	5	5	5	4	4	5
	Freeways	0	0	0	0	0	0	0
	Principal Arterials	37	35	35	35	35	35	35
	Minor Arterials	4	4	4	4	4	4	4
	Collectors	0	0	0	0	0	0	0
	Total	45	44	44	44	44	44	44
	Grand Total	100	99	100	97	100	100	95



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Table 4.9.1 (Continued)
2040 Estimated Crashes by Type by Facility Type by Alternative

Annual Average Injury Crashes								
		EC	Alt 1	Alt 1A	Alt 2	Alt 3	Alt 3A	Alt 4
Rural	Interstates	129	285	283	340	198	204	290
	Principal Arterials	607	355	383	359	497	517	337
	Minor Arterials	349	439	422	318	413	401	361
	Major Collectors	219	217	219	214	217	219	216
	Minor Collectors	1	1	1	1	1	1	1
	Locals	1	1	0	1	1	0	1
	Total	1,306	1,298	1,309	1,233	1,326	1,343	1,205
Urban	Interstates	316	406	407	382	356	362	394
	Freeways	64	38	38	40	65	65	43
	Principal Arterials	3,358	3,190	3,187	3,179	3,201	3,191	3,165
	Minor Arterials	366	375	369	373	375	368	379
	Collectors	2	2	2	2	2	2	2
	Total	4,106	4,012	4,003	3,976	3,999	3,987	3,983
	Grand Total	5,412	5,310	5,311	5,209	5,325	5,330	5,189

Annual Average Property Damage Crashes								
		EC	Alt 1	Alt 1A	Alt 2	Alt 3	Alt 3A	Alt 4
Rural	Interstates	300	662	658	791	459	475	675
	Principal Arterials	1,239	725	781	733	1,014	1,056	687
	Minor Arterials	688	866	832	626	813	790	710
	Major Collectors	388	385	389	379	385	388	383
	Minor Collectors	2	2	2	2	2	2	2
	Locals	1	1	1	1	1	1	1
	Total	2,618	2,641	2,662	2,532	2,675	2,711	2,459
Urban	Interstates	1,046	1,345	1,348	1,266	1,180	1,198	1,306
	Freeways	226	134	133	140	229	228	150
	Principal Arterials	10,474	9,952	9,939	9,917	9,985	9,952	9,872
	Minor Arterials	1,124	1,152	1,134	1,146	1,151	1,131	1,164
	Collectors	6	6	6	6	6	6	6
	Total	12,876	12,588	12,562	12,474	12,550	12,515	12,499
	Grand Total	15,494	15,229	15,223	15,006	15,225	15,226	14,958



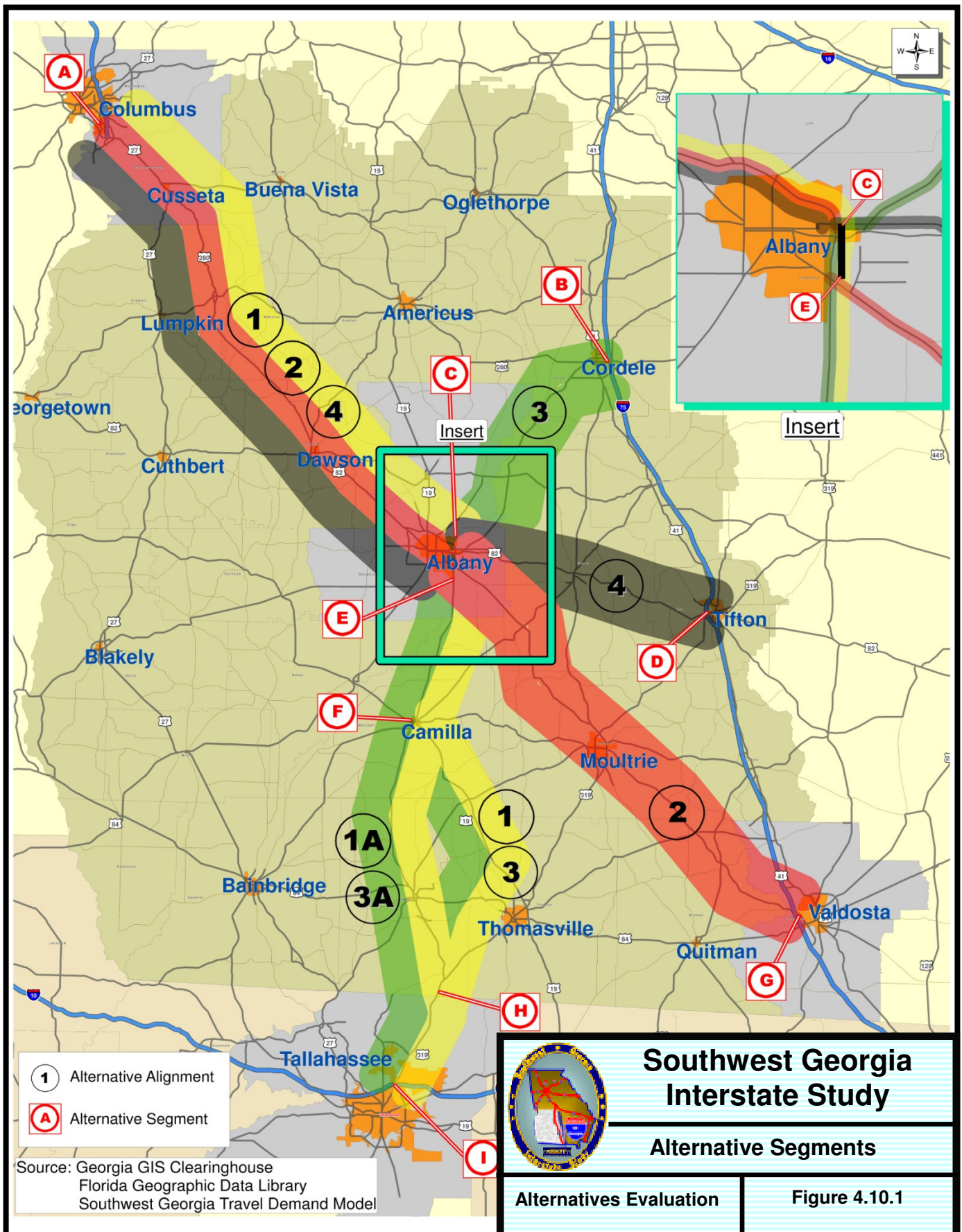
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4.10 Alternative Segments

Figure 4.10.1 shows both the Alternative alignments and segments that the alternatives have been subdivided by to permit more detailed comparisons, and allow for mixing and matching segments between alternatives.

Table 4.10.1 shows a summary of VMT, Truck VMT, VHD and Truck VMT as a percentage of total VMT by segment for each of the alternatives and the 2040 E+C network. Segment information is provided for each alternative that contains that segment to facilitate comparison across alternatives by segment. It is important to note that Table 4.10.1 only shows these variables by corridor – not for the entire study area. The corridor information by alternative is for both the hypothetical Interstate facility and any existing parallel roadways. For the E+C alternative the information is only provided for existing and committed road improvements as described earlier.

As can be seen in Table 4.10.1, VMT and truck VMT is highest for segment AC, between Columbus and Albany. The average percentage of truck VMT is highest for Alternative 2. The greatest increase in VMT is forecast for segment EG, between Albany and Valdosta; this segment also is forecast to have the highest percentage of truck VMT. Delay is reduced under all alternatives when compared to the E+C alternative. Reduction in delay is highest for segments AC, CD, and HI. VHT increases with VMT in corridors as travelers are drawn to the hypothetical new interstate facility in each alternative.





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Table 4.10.1
Summary of Total VMT, Truck VMT, VHD, VHT, and Truck VMT % by Corridor for New and Existing Roads

Alternative	Segment	AC	BC	CD	CE	EG	EF	FH West	FH East	HI	TOTAL
No Build											
VMT		2,046,471	516,871	972,887	73,348	671,513	455,452	232,580	306,467	392,830	5,668,419
VHD		4,641	161	3,337	395	1,379	293	131	48	9,562	19,947
Truck VMT		752,967	116,648	340,761	23,037	197,461	107,847	58,466	100,504	3,216	1,700,907
VHT		40,402	9,409	21,519	1,813	15,988	8,374	5,021	6,041	18,036	126,603
Truck VMT %		36.8%	22.6%	35.0%	31.4%	29.4%	23.7%	25.1%	32.8%	0.8%	30.0%
Alt. 1											
VMT		3,090,780	-	-	157,007	-	647,642	-	709,665	488,678	5,093,772
Truck VMT		1,178,601	-	-	52,852	-	141,470	-	156,234	7,067	1,536,224
VHD		969	-	-	56	-	15	-	12	4,592	5,644
VHT		46,775	-	-	2,622	-	10,097	-	11,084	13,676	84,254
Truck VMT %		38.1%	-	-	33.7%	-	21.8%	-	22.0%	1.4%	30.2%
Alt. 1A											
VMT		2,995,930	-	-	155,240	-	659,682	648,913	-	526,524	4,986,289
Truck VMT		1,111,538	-	-	48,475	-	129,020	102,211	-	26,817	1,418,061
VHD		789	-	-	55	-	18	53	-	4,645	5,560
VHT		45,205	-	-	2,594	-	10,313	10,055	-	14,339	82,506
Truck VMT %		37.1%	-	-	31.2%	-	19.6%	15.8%	-	5.1%	28.4%
Alt. 2											
VMT		3,288,894	-	-	183,411	2,497,114	-	-	-	-	5,969,419
Truck VMT		1,254,385	-	-	66,984	969,618	-	-	-	-	2,290,987
VHD		1,359	-	-	127	572	-	-	-	-	2,058
VHT		50,048	-	-	3,116	38,842	-	-	-	-	92,006
Truck VMT %		38.1%	-	-	36.5%	38.8%	-	-	-	-	38.4%
Alt. 3											
VMT		-	766,163	-	135,639	-	616,248	-	670,216	482,893	2,671,159
Truck VMT		-	136,635	-	39,260	-	119,139	-	131,740	6,891	433,665
VHD		-	38	-	54	-	11	-	10	4,513	4,626
VHT		-	11,605	-	2,309	-	9,642	-	10,513	13,493	47,562
Truck VMT %		-	17.8%	-	28.9%	-	19.3%	-	19.7%	1.4%	16.2%
Alt. 3A											
VMT		-	748,445	-	138,831	-	644,993	673,703	-	539,477	2,745,449
Truck VMT		-	131,911	-	38,413	-	119,617	116,297	-	38,078	444,316
VHD		-	30	-	52	-	14	54	-	4,634	4,784
VHT		-	11,339	-	2,352	-	10,086	10,417	-	14,506	48,700
Truck VMT %		-	17.6%	-	27.7%	-	18.5%	17.3%	-	7.1%	16.2%
Alt. 4											
VMT		3,091,489	-	1,438,838	-	-	-	-	-	-	4,530,327
Truck VMT		1,173,668	-	534,936	-	-	-	-	-	-	1,708,604
VHD		983	-	225	-	-	-	-	-	-	1,208
VHT		46,830	-	22,738	-	-	-	-	-	-	69,568
Truck VMT %		38.0%	-	37.2%	-	-	-	-	-	-	37.7%

